SFIP
OECA

EPA United States Environmental Protection Agency

Office of Enforcement and Compliance Assurance

SECTOR FACILITY INDEXING PROJECT

Evaluation: December 1999

Sector Facility Indexing Project Evaluation

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EXECUTIVE SUMMARY

The Environmental Protection Agency (EPA) collects and maintains environmental performance information on hundreds of thousands of facilities and operations subject to environmental regulations in the United States. Facility-level information is collected under many different regulatory programs and is typically stored in separate federal data systems. The Sector Facility Indexing Project (SFIP) was initiated in 1995 as a pilot to test several new policy and program alternatives. In particular, the project sought to demonstrate that there is value in organizing facility-level information along industry sectors. In addition, SFIP demonstrated that the information, while admittedly complex, can be summarized in a way that will allow the general public, as well as environmental organizations and industry, to better understand the environmental performance of facilities. Following a development stage in which many types of stakeholders were consulted, EPA launched the SFIP website on May 1, 1998. Website users are able, for the first time, to conduct their own analyses on-line and look up facility-level information that is both complete and current.

This evaluation of SFIP, undertaken at the end of the project's first full year of operation, reveals several findings that are important for the many individuals and organizations involved in developing environmental policy and programs in the U.S. and abroad. The most significant finding of the evaluation is that simplifying facility-level records and providing easy access to the data has created value for environmental managers at all levels of government, the public and even the regulated community. Users have been especially appreciative of the reliable sector universes and permit linkages for individual facilities that are readily available on SFIP's website.

The evaluation shows that SFIP is also valuable as a laboratory for examining environmental data management and analysis procedures. Most importantly, SFIP has proved that it is feasible to link all records belonging to a facility, a key enhancement for sector-level analysis. In addition, the project's continuing commitment to data quality review has resulted in the identification of several opportunities for further improvement, including inconsistent interpretation of coding guidelines across Regions/states (e.g., what constitutes an administrative order) and errors in data processing (such as duplicate records of enforcement actions). All of the identified data problems have been or are now being addressed. Finally, SFIP continues to provide important baseline information that the Agency is using in its current work on consolidating facility reporting, improving integration of facility records and streamlining the flow of data from state and Regional data systems to the federal level.

SFIP has provided EPA with an important new tool to support the re-orientation of the Agency's numerous data analyses along industry sector lines. Users are eager to see SFIP continue this contribution by expanding to additional sectors and adding more data. Throughout the first year of the website's availability and during the evaluation process, users have recommended numerous sectors for SFIP's expansion. The list of suggested sectors that are both feasible to include and that are Agency priorities, includes, but is not limited to: metal services, electric utilities, paper manufacture, and federal facilities.

This report documents the extent to which SFIP met its original goals, how it has affected a variety of environmental management activities for the five SFIP industry sectors, and stakeholders' recommendations for enhancements and expansion of SFIP.

OVERVIEW

The U.S. Environmental Protection Agency's (EPA's) Office of Compliance (OC) initiated the Sector Facility Indexing Project (SFIP) in 1995 to empower citizens and communities to protect public health and the environment by providing the public with high-quality environmental information for five industry sectors. Expanded public access to environmental information has been mandated in recent right-to-know legislation and was identified in EPA's 1997 Strategic Plan as one of the Agency's ten strategic long-term goals.

SFIP is a pilot project intended to make facility-level compliance information readily available to the public in one location on the Internet. On May 1, 1998, EPA Administrator Carol Browner publicly launched the project's website (www.epa.gov/oeca/sfi). The pilot effort required improved data integration among the various federal data systems and improved formatting of compliance information to reduce its complexity and facilitate its use. The project has two primary goals:

- Provide greater public access to accurate compliance and facility-level information; and
- Improve multimedia facility profiling and sector-based analysis.

Because of the project's innovative nature, the Agency committed itself to extensive monitoring of SFIP's impacts and a thorough evaluation of the project at the conclusion of the first year of operation. This evaluation report draws on many sources of information:

- Calls to SFIP's User Hotline, and emailed and written comments;
- Website use statistics;
- Feedback on the project from Regional/State demonstrations of the website;
- Discussion groups held with EPA staff, representatives from environmental organizations, facilities included in SFIP, state environmental agencies, and trade associations.

Evaluation Results

This evaluation shows that SFIP has been overwhelmingly successful in achieving its two primary goals: providing public access to compliance information and improving multimedia facility profiling and sector-based analysis. The principal findings of the evaluation include:

1. SFIP is being used extensively for research by thousands of users and is considered a valuable tool.

   The website allows users to review the records of individual facilities, to conduct on-line analysis, and to download information for off-line analysis. Over 66,000 user sessions and 404,000 hits have been logged on SFIP's website since its launch. Since it has been publicly available, the site has hosted an average of 4,183 user sessions per month, approximately 10,000 sessions per sector in a year. Individual citizens and grassroots groups have used the site to profile nearby facilities. Public interest groups have conducted analyses of sectors and individual facilities within a given sector. Industry has used data from the site to publicly showcase their compliance history in press releases, and to review their own compliance

records and that of competitors. EPA has used SFIP to conduct a variety of analyses, including comparative analyses of EPA program efforts (e.g., inspection rates).

2. SFIP has met the challenge of summarizing complex compliance and pollutant release information from multiple statutory programs.

   SFIP increased the consistency of definitions and carefully matched the information extracted from five different programs (Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Toxics Release Inventory, and Emergency Response Notification System). This approach allowed the information to be summarized at the facility level. SFIP has also made possible several new types of analyses that summarize compliance and pollutant release information. Examples include:

   - Analyses prepared from SFIP's downloadable spreadsheets have been used by EPA Regional offices to compare their programmatic efforts and the performance of facilities within the Region to national averages.
   - On-line queries were used to identify facilities with unusually high or low frequencies of reported pollutant spills -- for increased compliance efforts and for verification of other spill reporting (e.g., under EPCRA Section 313).
   - OECA's Sector Strategies for Petroleum Refining, Nonferrous Metals, and Iron and Steel have used SFIP to profile existing compliance problems and to establish benchmarks for ongoing compliance trend analysis.

3. There is a high level of confidence in SFIP's data because of OECA's commitment to providing and ensuring quality data. An initial Data Quality Assurance Review by states, EPA Regions and profiled facilities prior to the SFIP website launch showed EPA's compliance data to be of high quality. An email link on the website and a project Hotline allow facilities to submit data correction requests at any time. Users regard SFIP's data as "quality-checked" and consider this one of the project's best features.

4. SFIP brought to light a number of areas for improved data maintenance.

   SFIP has identified opportunities for improving the processing of compliance data as it is compiled into EPA's data systems and into OECA's Integrated Data for Enforcement Analysis (IDEA) system. SFIP's identification of issues such as the need for more consistent entry of return-to-compliance dates for RCRA violations has improved EPA data quality. SFIP has also demonstrated the need to simplify the procedures facilities must follow to correct the data maintained in AFS, PCS, and RCRIS, the regulatory "program" databases that maintain data presented in SFIP. Industry representatives have suggested that EPA appoint an "ombudsman" for facility data correction requests, who would help guide facilities through this process. Lessons learned in the course of SFIP's development are now being used in the Agency's data system modernization work, for example, by the Agency's Facility Identification Initiative, which is creating a central federal registry system where information common to multiple permits can be more easily entered and maintained.

5. Problems anticipated by the states prior to the launch of SFIP did not occur or have been quickly resolved.

   Success in this area was due to quality assurance and quality control efforts, and EPA's willingness to work with facilities to make corrections when appropriate. For example, some states initially expressed concern that their resources would be taxed by information and interpretation requests from the public. However, states have not reported any such problems since the website's launch. States which participated in a 1999 discussion group verified that the SFIP launch did not increase their workload associated with responding to public inquiries.

6. Users have strongly urged EPA to extend SFIP to cover additional sectors in order to capture the potential value demonstrated by the project's successful pilot effort. Requests have been received from all stakeholders for access to data for more industry sectors in addition to the five currently included in SFIP.

Future Directions

In evaluating SFIP, the Agency looked to the users of the information for feedback. Many users have provided valuable insight on how to make the site even more accessible and user friendly, and how they would like the SFIP to move forward. Issues that some users have asked EPA to consider in the SFIP planning process include:

- Adding new sectors, including but not limited to: metal services, electric utilities, paper manufacture, and federal facilities.

- Adding new data elements to information already provided, including, for example: pollutant releases and waste management information from CWA, CAA and RCRA; OSHA inspections and more details regarding permits (e.g., expiration dates and emissions limits). These additions will enhance the whole-facility profile provided by SFIP of each facility's operations, environmental performance and the geographic area in which they are located.

- Providing users the ability to do geographic mapping and/or to conduct cross-sector analysis in a geographic area. This might include a listing of facilities within three miles of a location which are known to release pollutants, or a profile of facilities within a municipality.

- Extending compliance information beyond two years and giving users the ability to conduct time series analyses. Physical, organizational and operational improvements (e.g., new treatment plant) at a facility can take several months or several years to manifest themselves in changed performance. Extending the time period and the addition of time series analysis would allow users to distinguish changes in performance at the facility and sector levels over a longer time period.

BACKGROUND

As part of the Environmental Protection Agency's (EPA's) reinvention efforts to find new approaches to improve environmental compliance and performance, as well as to encourage environmental stewardship, EPA is undertaking an increasing number of project-specific evaluations which take stock of innovative activities. Such evaluations enable the Agency to assess a project's effectiveness and to plan for continual improvement.

The purpose of this report is to evaluate the Office of Compliance's (OC's) Sector Facility Indexing Project (SFIP) and summarize users' recommendations for SFIP's future development. EPA believes that it is critical to inform and involve all those interested in projects like SFIP, to solicit stakeholder input, and to improve environmental performance while exploring better ways to achieve EPA's goals.

What is SFIP?

The Sector Facility Indexing Project has two major functions: it is both a community-right-to-know project and a data integration pilot. The SFIP website gives the public access to environmental performance data for five industry sectors. Whole-facility environmental profiles presented on the website are the result of SFIP's pilot effort to bring together, or "integrate" facility data from a wide range of sources. In keeping with community right-to-know principles, the Agency is committed to achieving cleaner, cheaper, and smarter results through efforts such as SFIP which expand public access to environmental information and thereby increase public involvement in environmental protection.

SFIP's website (www.epa.gov/oeca/sfi) profiles approximately 650 individual facilities in five industry sectors: automobile assembly, pulp manufacturing, petroleum refining, iron and steel production, and the primary smelting and refining of nonferrous metals (aluminum, copper, lead, and zinc). For each facility included, SFIP provides environmental data such as the number of inspections, compliance with federal regulations, enforcement actions taken, chemical releases, and pollutant spills. SFIP also includes background information on the location and production capacity of each facility, as well as information on the population of the surrounding area. Web pages describing the data indicators presented and summarizing the project's history provide additional context to enhance users' ability to understand and use SFIP's data. Importantly, SFIP has continuously sought stakeholder input on all aspects of the project, including the facility data. EPA has established a dedicated hotline to support SFIP users, and the project's website allows users to email comments directly to the Agency.

The SFIP website is unique in that it brings together environmental and other information from a number of data systems in one comprehensive database. Users can access facility level information as well as whole-sector profiles. Three standard presentations of facility data are available, while a "Custom Search" option allows users to design their own reports by selecting up to 6 of 29 possible searchable indicators at a time. Information about facilities and/or sectors may also be obtained for all indexed facilities in a given city, state, or EPA Region.

Goals of SFIP

This evaluation considers SFIP's success in meeting its two major goals:

- Provide greater public access to accurate compliance and facility-level information; and
- Improve multimedia facility profiling and sector-based analysis

Expanding public access to environmental information has been one of EPA's top priorities since it was first mandated by "right-to-know" legislation, including Title III of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986, which established the Toxics Release Inventory (TRI). EPA's own 1997 Strategic Plan designated increased public access to environmental data as one of ten strategic long term Agency goals.

The 1997 Strategic Plan specifies that EPA provide communities with easy access to information about the state of their local environment, and provide the public with tools to protect their families and their communities. EPA has identified several strategies to meet these goals, including, but not limited to: increasing the quality and quantity of general environmental education, outreach and data availability programs; providing information tools which empower communities to make decisions; making all non-confidential information and data at EPA available to the public; improving electronic access to information by significantly expanding the type and amount of information available on the Internet; and ensuring citizen access to the compliance and enforcement records of regulated facilities so that communities can easily monitor the extent of facility compliance with environmental laws and permit conditions.

SFIP was developed as part of these "right-to-know" efforts, as a primary pathway through which facility-level environmental information can be disseminated to the public. EPA anticipates that SFIP will further the dialogue among regulated businesses, their surrounding communities, and government agencies; assist the public in examining and comparing records of individual facilities in nearby communities; and assist businesses and corporations in tracking their own performance. Finally, EPA expects that SFIP can be a useful planning and analytical tool for all levels of government.

To enhance the usefulness of the multimedia information to be made public, EPA sought to create whole-facility and whole-sector environmental profiles; establish reliable rosters or "universes" of all facilities within a given industry sector; and standardize the information to the extent possible. Currently, EPA maintains data collected under the Clean Air Act (CAA), Clean Water Act (CWA), Resource Conservation and Recovery Act (RCRA) and Toxics Release Inventory (TRI) data in several separate databases. In addition, each program database uses a different facility identifier, and may track the same facility under different names or even different addresses. For these reasons, it is difficult for government and public data users to reliably identify all facilities within a given industry sector (the sector "universe") and to obtain a complete environmental profile for an individual facility.

EPA initiated SFIP in early 1995 by first researching which facilities fall into each industry category and then performing extensive, iterative, automated and manual procedures to "link"

permits tracked in the program databases to these facilities. The initial sectors were chosen based on the following criteria:

- the sectors fell within manufacturing SIC codes (SIC 20-39),
- the sectors had a small number of facilities (under 1,000),
- facilities had high relative pollutant output per facility,
- facilities had relatively similar processes and products, and
- the sectors had several comparative sources of facility data.

This methodology allowed EPA to make use of existing pollutant release data under the Toxics Release Inventory (TRI); initially constrain analysis to sectors of manageable size for this pilot effort; and allow a certain degree of facility comparison.

EPA then spent three years assembling environmental profiles for the over 600 facilities in SFIP's industry sectors and designing and developing a publicly accessible website. As part of the planning process, EPA solicited input from multiple "stakeholder" groups, including offices within EPA, state governments, environmental organizations, individual facilities SFIP planned to profile, and the trade associations for those industry sectors. The Agency also undertook a comprehensive data quality review to prepare the data for its public release on May 1, 1998.

Innovative Features of SFIP

- SFIP integrates data from numerous EPA databases and external sources to provide one comprehensive database of facility-level profiles for the complete "universe" of facilities in five industry sectors. In the past, users had a difficult time accessing this information because it was dispersed across several different databases which are not directly accessible by the public.

- SFIP extracts and displays key data elements ("indicators") from among the many layers of complex data maintained by EPA in various hard-to-reach databases in order to provide accessible and useful environmental facility profiles. Customized data reports available on the website present both "raw" and aggregated data for each facility, allowing users to perform comparative analyses as well as more thorough inquiries into individual facility records. The ability to generate such customized reports is unique to SFIP.

- EPA has made continual efforts to ensure that SFIP provides the highest possible quality of data to the public. In response to stakeholder input elicited during the project's development, EPA implemented an unprecedented initial quality review of SFIP data. State agencies and EPA regional offices reviewed data from SFIP's environmental profiles between November 1996 and February 1997. In addition, in August 1997, EPA provided each facility that the Agency proposed to include in SFIP with a copy of its environmental records. Concurrently with the direct facility mailing, EPA established a hotline to answer questions concerning facility data or the review in general. While the data quality review was voluntary and participation was solely at the discretion of the individual facilities, approximately two-thirds of the profiled facilities chose to submit comments. Corrections proposed by facilities were then forwarded to the states and EPA Regions for resolution.

Since the website's launch, facilities have been encouraged to continue to review their updated data reports and to submit comments at any time via the SFIP Hotline, the website's email link, or by mail. In addition, since the launch, discussion groups have been convened with facilities, environmental groups, representatives from state environmental agencies, and EPA staff. These discussion groups provided a further opportunity to obtain feedback about the accuracy of information presented on the website.

ORGANIZATION OF EVALUATION RESULTS

In assessing SFIP's success, this evaluation first considers the project's public access goal and then reviews the its data integration effort. Additional comments and recommendations for SFIP's future development are then discussed.

Results of the evaluation are presented using the following structure:

* **Goal 1: Provide greater public access to compliance and facility-level information**

  ✓Awareness:
  What is the extent of pubic awareness of SFIP? What are the effects of public awareness of SFIP?

  ✓Customer Satisfaction:
  Do users find SFIP's data useful, understandable, and easy to access?

  ✓Behavior Change -- Information Use:
  How are SFIP data being used?

* **Goal 2: Improve multimedia facility profiling and sector-based analysis**

  ✓Advancing Data Integration Knowledge:
  What has SFIP shown about the feasibility and benefits of creating facility and sector-level environmental profiles?

  ✓Assessing Data Quality in Federal Data Systems:
  What have SFIP's ongoing data quality assurance procedures shown about EPA data quality?

Future Directions: Comments and Recommendations

Sources of Data

EPA has continued to seek input from SFIP stakeholders throughout the development and implementation of the project. This evaluation draws on comments received during the project's planning process and since the website's launch, as well as findings from numerous other sources, including a series of discussion groups conducted specifically for this evaluation during 1999. The major sources are described below:

Hotline calls and emailed comments

Since the website's launch, SFIP has maintained a user support hotline staffed during business hours. The project maintains a record of each call. SFIP's website also allows users to submit comments by email at any time. Users submitting comments via the SFIP Hotline and/or by email are generally not required to identify themselves.

Website use statistics

Information about SFIP users which can be tracked on the website includes statistics on the frequency of "hits"[1] and "user sessions"[2] logged on the site (see Appendix 1 for detailed reports on SFIP use statistics for May 1-October 3, 1998).

Regional/State Demonstrations and Discussion

EPA headquarters staff have made presentations on SFIP to Regional and State officials at all ten Regional EPA offices since the SFIP website was launched. These presentations had multiple objectives: to explain the purpose and goals of SFIP; to conduct an online demonstration of the project's website; and to obtain feedback on how the SFIP can be developed further, including what additional information and additional sectors would be most valuable to the Regions and states. Managers and staff with responsibility for data management, environmental measurement, enforcement, compliance assistance, environmental justice, and government relations attended the presentations.

In order to most effectively demonstrate how Regional and State staff might use SFIP, each presentation included a review of the environmental history and performance of a facility within the Region. Attendees were shown a sample of the vast array of information available on the site and saw how SFIP allows users to choose from among several different ways to sort and analyze the data presented. During the majority of the demonstrations, Headquarters staff also provided analyses created from SFIP downloadable spreadsheets that allow the Regions to compare their programmatic efforts and their facilities' performance to national averages.

Discussion groups

EPA organized discussion groups with (1) EPA staff, (2) representatives from environmental organizations, (3) representatives of facilities included in SFIP, and (4) representatives of state agencies. These meetings provided an opportunity to obtain input from frequent users of SFIP

[1]A "hit" is an action performed on the website, such as viewing a page or downloading of a file.

[2]A "user session" is a discrete period of activity generated by an individual user.

and to explore their experiences with and reactions to the project. The discussion groups were convened in Washington, DC during 1999. SFIP project staff were not present at any of the discussion groups, and participants were assured that their remarks would remain anonymous. In keeping with the Paperwork Reduction Act , all meetings included fewer than ten people. Subsequently, several individuals who were unable to attend the group meetings provided input through separate interviews. In this report, the term "discussion groups" will be used to refer to both the group meetings and the individual interviews. For sample questions which discussion group participants were asked to consider, see Appendix 2.

In addition, as part of an ongoing dialogue with the trade associations representing facilities included within SFIP, EPA Headquarters staff met with the associations on March 11, 1999 to obtain their current perspective on SFIP and to gather insight from their experience in working with member facilities on the project. The meeting was attended by representatives from the Association of International Automobile Manufacturers (AIAM), The American Forest & Paper Association (AF&PA), the American Petroleum Institute (API), the National Petroleum Refiners Association (NPRA), and the Aluminum Association (AA).

EVALUATION RESULTS

Goal 1: Provide greater public access to compliance and facility-level information

Three main topics are considered in evaluating SFIP's public access goal:

Awareness

SFIP's success as a community right-to-know initiative depends on public awareness of its information and tools. This section evaluates the extent of public awareness of SFIP materials, and also briefly discusses the potential effects of this awareness.

Customer Satisfaction

This section evaluates whether the SFIP website provides the public with an effective information tool by asking the following questions:

- Are the data provided by SFIP valuable to users?
- Is the information presented on the SFIP website understandable by users?
- Is the website easy to find and use (i.e., "user-friendly")?

Information Use

This section discusses how SFIP's information is being used, both by members of the public and by EPA.

Awareness

EPA has promoted awareness of SFIP primarily through its work with project stakeholders in designing the project and ensuring data accuracy. In the course of developing the environmental profiles presented on the website, EPA worked closely with state governments, Regional EPA personnel, environmental organizations, facilities from the five industry sectors included in SFIP, and trade associations for those industry sectors. A press release announced the May 1, 1998 launch of the site by EPA Administrator Carol Browner (Appendix 3). Over 50 articles on SFIP have appeared in newspapers, magazines, and trade journals. Many websites offer links to SFIP. In addition, Federal Register notices have notified the public about the project's major milestones, including a May 1997 public meeting at which EPA solicited stakeholder input. Finally, EPA headquarters staff have presented the project and provided numerous demonstrations of the website to trade associations, environmental organizations, and state and Regional staff.

FINDINGS:

Over 66,000 user sessions and 404,000 hits have been logged on SFIP's website since May 1, 1998.

Hotline calls and emails indicate that there are numerous users of many types, including individual citizens, and representatives from environmental groups, law firms, and consulting firms.

SFIP is an innovative tool new to the Agency; thus, continued outreach efforts should be emphasized.

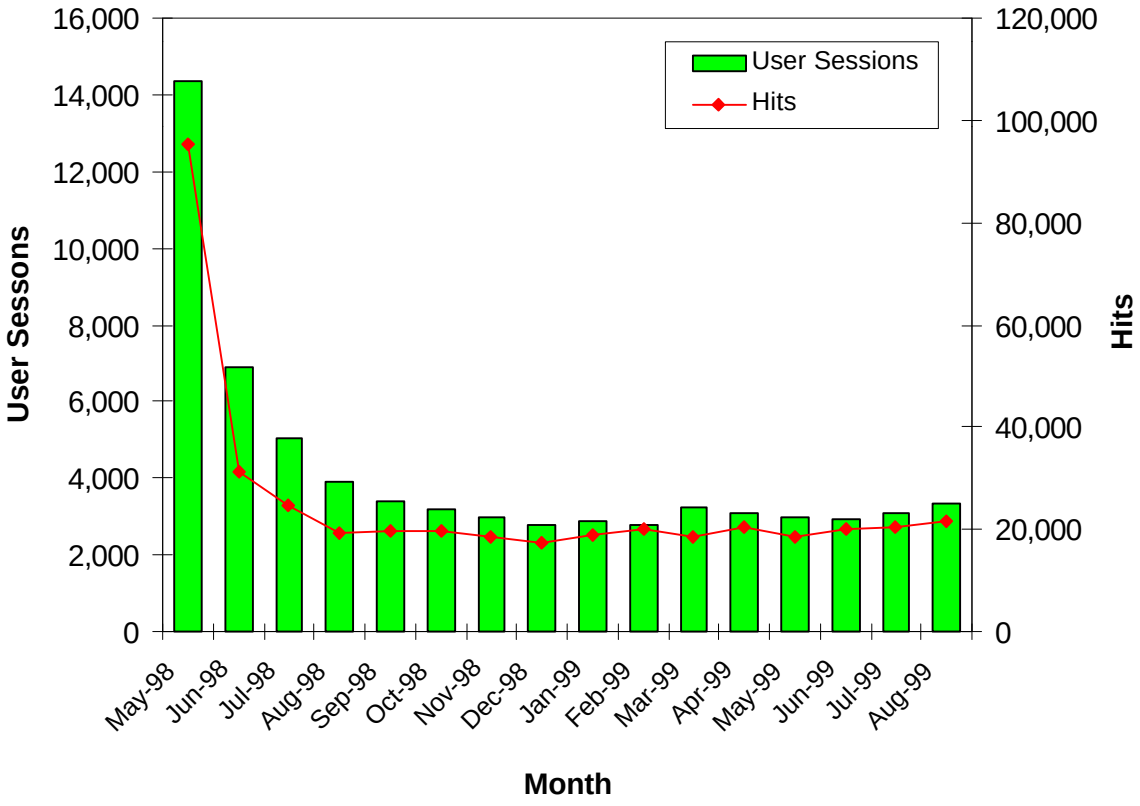
Extent of Awareness

Since the SFIP website's launch, website use statistics show that users have logged a total of 66,924 sessions on the site, or an average of 4,183 sessions per month. The site received 404,642 hits during this period. In the site's first month, there were 14,375 user sessions and 95,379 hits. Subsequent use has been steady, with an average of 3,503 user sessions and 20,618 hits per month (Graph 1). A September 1998 summary of use statistics for all Office of Enforcement and Compliance Assurance (OECA) web pages shows that SFIP is among the projects which have drawn the greatest number of users to OECA sites.

An increase in website use as measured in both user sessions and hits has been consistently observed during each week following an update of SFIP's data. In response to this clear indication that users are interested in accessing new data as soon as it becomes available, SFIP recently added a page to the website that allows users to request an automatic email notification when a data refresh has occurred.

Graph 1: SFIP Web Use Trends

User Sessions (Left Axis) and Total Hits (Right Axis)



Statistics tracked for SFIP's website show that EPA staff account for approximately five percent of user sessions. Other frequent users include environmental groups, state employees, representatives of facilities included in SFIP, law firms, consulting firms, and individuals affiliated with universities. The majority of frequent users cannot be identified by type, however, because they access the site through a commercial Internet service provider (ISP) rather than a domain name unique to a company or organization. ISP users are more likely to be smaller organizations or individuals.

Since the website's launch, the Hotline has received 295 calls and emails, including 55 requests for the printed July 1998 Progress Report. While SFIP facilities or their corporate representatives accounted for 43% of all comments (128 of 295), the remainder came from a wide variety of users, including individual citizens, environmental groups, law firms, consulting firms, and representatives from companies in industry sectors who consider SFIP facilities to be potential customers (e.g., manufacturers of pollution control equipment). The Hotline has been the primary point of contact for users — 219 calls have been received, while users have sent 64 emails and 12 written letters.

SFIP's launch was widely reported in mainstream newspapers, and in industry and government print and Internet publications. Twenty-three articles which appeared in May 1998 were mainly news reports that described the project and announced the availability of the website. A number of analyses which express different perspectives on the project have also been published. The Working Group on Community Right-To-Know issued a press release describing SFIP as "an important advance for public access to EPA information." The Environmental Defense Fund also issued a press release which praised the project. In contrast, articles in publications such as *Octane Week* and *Business Insurance* have emphasized industry's concern with SFIP's data quality. Over 30 additional articles on SFIP have appeared since the May 1998 launch of the website.

EPA headquarters and Regional staff and environmental organization representatives who participated in the 1999 discussion groups reported that they have begun using SFIP for various analyses and are becoming increasingly knowledgeable of the array of information that can be accessed through the website. Environmental groups also reported that projects for which they use SFIP data often involve partnerships with other organizations and communities, whose members may become aware of and use SFIP in the course of the collaboration. The "public" they work with who are affected by SFIP includes local-level activists and community groups, policy makers, and people who live near particular facilities.

Organizations that have used their websites to link to SFIP and to provide information on the project also help to increase public awareness of SFIP. For example, the Environmental Defense Fund (EDF) not only provides a link to SFIP from their "Scorecard" site, but also gives an in-depth explanation of the project and states that "EDF encourages members of the public to use this new, innovative right-to-know tool." The State of Michigan, which initially expressed concern over SFIP, now lists SFIP on its website as an "Environmental Link of Interest."

Awareness of SFIP has also increased due to outreach efforts by EPA headquarters staff. A variety of organizations have expressed interest in SFIP and have requested presentations on the project. In addition to speaking with representatives from facilities, environmental organizations, and state agencies that had been active in the development phase of SFIP, EPA also met with such organizations as the National Electrical Manufacturers Association, the Lead Industries Association, and the Forum on State and Tribal Toxics Action (FOSTTA), as well as Congressional and State staff. EPA headquarters staff also visited all EPA Regional offices to introduce the Regional staff to this new tool.

In discussion groups, industry representatives reported that, although they had used SFIP to check the accuracy of EPA data, they had not heard from the public regarding SFIP. Similarly, at the March 1999 trade association meeting, representatives understood their members to be keeping abreast of their individual facility information, but were unaware of communications between the facilities and the general public with regard to SFIP.

At least one company with several facilities included within SFIP has used the project's data to communicate with the public via the company's public relations activities and its own website.

ASARCO Incorporated has released separate press releases for five facilities discussing the data that appeared for each facility within SFIP[3].

During SFIP's development, some states expressed concern during SFIP's development that they would be burdened by numerous inquiries from the public and facilities about SFIP data. However, state representatives who attended the 1999 discussion group reported that this has not, in fact, been the case. Instead, participants commented that the lack of contact between their agencies and the public concerning SFIP indicates that the public may not be sufficiently aware of SFIP to derive its full benefit. Discussion group participants noted that making environmental data accessible to the public is a significant priority for their states and all described initiatives underway at their agencies to increase the public's access to data, particularly through the Internet.

Effects of Awareness

Input from all types of SFIP stakeholders suggests that increased public access to facility environmental performance data in general, and greater public awareness of SFIP in particular may provide an additional incentive for companies to maintain exemplary environmental records and may increase the dialogue between included facilities and the surrounding community.

EPA staff who participated in the 1999 discussion group, as well as Regional staff who attended website demonstrations, felt that improved public information disclosure can and does bring about improved environmental performance, stating that "heightened public scrutiny can heighten industry stewardship." State representatives who participated in the 1999 discussion groups also felt that SFIP may prompt companies to increase their compliance efforts. In addition, EPA staff have reported that SFIP has promoted greater state/Regional cooperation. EPA staff felt that some state agencies have become more responsive in making data corrections. Regional staff who attended demonstrations of SFIP also expressed a need to develop innovative approaches and to go beyond "traditional enforcement" in order to bring industry into compliance. The Regions are looking to tools such as SFIP to achieve improved environmental performance when the potential for environmental gains through additional enforcement efforts is limited.

Representatives of environmental organizations who participated in the 1999 discussion group felt that analytical reports they produce using resources such as SFIP generate increased attention from local press and calls to facilities with less than perfect records. Several environmental organization representatives discussed mechanisms by which public access to environmental information could result in pressure on companies to improve their performance, such as public meetings.

Industry representatives have described a heightened awareness of public perception as the major change in facility behavior due to SFIP. Discussion group members identified relationships with

[3]Press releases dated May 1,1998, www.asarco.com/PressReleases/sfipamar.pdf, www.asarco.com/PressReleases/sfipehel.pdf, www.asarco.com/PressReleases/sfipelps.html, www.asarco.com/PressReleases/sfipglov.pdf, www.asarco.com/PressReleases/sfiphay.pdf, referenced October 15, 1999.

communities surrounding their facilities, including with facility employees and their families, as a high priority for their companies. They stated that their companies are particularly concerned with how they are perceived by these members of the "public," as well as by their customers and wish to maintain a positive image. During the March 1999 trade association meeting, an association representative for the pulp manufacturing sector reported that SFIP can be seen as a positive innovation in so far as it is viewed by some facilities as providing an opportunity to interact more with the surrounding community.

Customer Satisfaction

SFIP's website is designed to provide public access to useful, understandable environmental information in a user-friendly format. This section evaluates three components separately, asking:

- Are SFIP data useful?
- Are SFIP data understandable?
- Is the website easy to find and use?

Although a hard copy report was made available in September 1998, the Internet is the primary pathway for public access to SFIP data. Three major types of reports are available, which present "raw" data for each facility and aggregated data by facility and by sector. Background information including detailed descriptions of the data indicators and a summary of the project's history provides context to enhance users' understanding of the data presented. "Easy Search" pages allow users to locate specific facilities and groups of facilities by city, state, and EPA Region, as well as by facility name, while the powerful "Custom Search" option allows users to identify and sort facilities by different data indicators, such as whether the facilities have reported pollutant spills, or the number of people who live within three miles of the facility. Spreadsheets containing the raw data accessed through these searches are downloadable in two formats (Lotus 123 and Microsoft Excel).

EPA has also continuously added new features and incorporated suggested changes to the SFIP website during the project's development. For example, the ERNS Incident Report available through SFIP has been reformatted to make it easier for users to quickly identify key data elements such as the type and quantity of material released during pollutant spills. SFIP Detailed Facility Reports have also been reformatted to increase ease of use, e.g., by presenting compliance history by calendar quarters rather than by EPA's fiscal year quarters. Similarly, explicit date ranges for the two-year data presented in the Facility-level Statistics report have been added to the headings of that report. New website features include a page describing SFIP's update schedule and procedures, a page with background information on SFIP's "facility universe", and a form that allows users to request email notification when SFIP data are updated.

FINDINGS:

Users value the data presented in SFIP — the public is logging on to SFIP and "digging down" to the wealth of data offered.

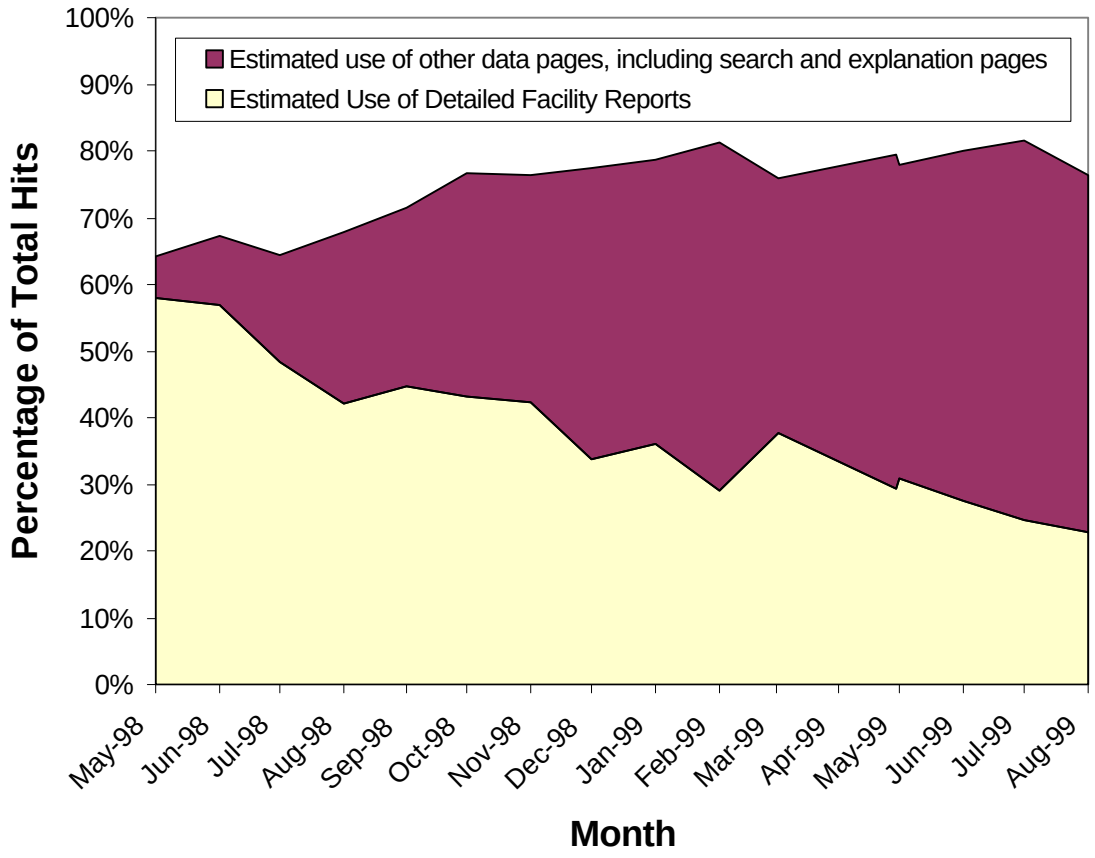
Most users feel the site is user-friendly. However, some users have called for continued improvement in providing "context" for SFIP's data and better explanations for some data elements.

Requests from users for access to data for more industry sectors in addition to the five currently included in SFIP are a strong indication of customer satisfaction with the pilot project.

Are SFIP data useful?

EPA tracks website use statistics for SFIP to assist in evaluating the project and generating measures that show how SFIP's data are used by the public. Knowing the number of "hits" to the website is helpful but EPA understands the need to go beyond "counting beans" to measure environmental results. Thus, SFIP developed additional measures to assess users' experience with the database and understand how the database is being utilized. Use statistics tracked for the SFIP website show that the majority of hits to the site relate directly to data use (e.g., hits to search pages and forms, data downloads, and data report views), while a smaller proportion of users' activity is devoted to accessing information about the project's purpose and background. Graph 2 shows estimated data use since the site's launch.

Graph 2: Proportion of Hits Related to SFIP Data Use



It is estimated that data use accounted for approximately 72% of all hits over this period, and has increased since the site's launch from 64% in May 1998 to 82% in July 1999 and 76% in August 1999. In addition, while the estimated proportion of views of Detailed Facility Reports for individual facilities has increased, other forms of data use have declined, probably reflecting more efficient use or bookmarking of search paths by repeat users. Once users become familiar with the SFIP website, they have sufficient knowledge to go directly to the data rather than repeatedly reviewing the background and explanatory information.

The website's use statistics also indicate users' level of interest in each industry sector included in SFIP. As measured by hits to each sector's dedicated "Data Access" page, the Petroleum

Refining sector data has received the most attention to date, followed by Pulp Manufacturing, Iron and Steel Mills, Primary Nonferrous Metals Smelting and Refining, and Automobile Assembly (Table 1). However, Primary Nonferrous Metals and Automobile Assembly facilities received the highest number of hits per facility.

Table 1: Data Access by Sector

Page Viewed	Cumulative Hits	Number of Facilities in Sector	Hits/Facility
Petroleum Refining Data Access	7,058	168	42
Pulp Manufacturers Data Access	5,092	244	21
Iron and Steel Mills Data Access	3,944	121	33
Primary Nonferrous Metals Data Access	3,171	50	63
Automobile Assembly Data Access	2,912	57	51

The SFIP website is considered useful by staff from EPA headquarters, Regional EPA offices, and state agencies. A September 1998 report by the General Accounting Office which assessed the status of EPA's efforts to provide communities with risk information, make TRI data publicly accessible, and develop standards and procedure for disseminating environmental information found that SFIP is one of three EPA projects that "collectively... would substantially expand the information available to communities"[4].

Both EPA headquarters staff who participated in the 1999 discussion groups and Regional staff who attended demonstrations of SFIP felt that reliable, externally referenced universes are an extremely valuable feature of SFIP. SFIP data has allowed these users to screen and target facilities for compliance assistance and enforcement, access background information on facilities of particular interest, and identify trends in sector data. Following presentations on SFIP capabilities and demonstrations of the website's capabilities, Regional staff saw SFIP as useful for targeting and compliance assistance efforts. In addition, Regional staff felt that SFIP could be a catalyst for increased dialogue and cooperation with states in efforts to ensure the accuracy of the underlying databases.

State representatives who participated in the 1999 discussion groups were not aware of staff use of SFIP within their agencies. However, states provided positive feedback at SFIP demonstrations. For example, a representative from the Oregon Department of Environmental Quality considered SFIP to be the type of project EPA should continue, and pointed out that SFIP is beneficial to states as a planning tool. A Maryland inspector who conducts multi-media inspections said that SFIP can be useful in deciding what facilities to inspect. He commented that it is "very useful to first go on the computer and review information before going out to a facility." A Florida state representative commented that SFIP "is excellent" and the Agency's efforts on this project should be "applauded."

[4]United States General Accounting Office, *Environmental Information – Agencywide Policies and Procedures are Needed for EPA's Information Dissemination*, GAO/RCED-98-245, September 24, 1998.

Environmental organizations have stated that they particularly value the complete, "quality-checked" universe of facilities provided by SFIP. In discussion groups held in 1999, SFIP's well-defined sector universes and facility permit linkages were described as "incredibly useful," in contrast to other sources where it may be "impossible to determine what constitutes a sector," or where differing permit names and addresses make it difficult to identify all the permits belonging to a given facility. Environmental organizations stated that while facilities differ, SFIP provides a valuable starting point for comparisons.

Other aspects of SFIP that environmental representatives have found particularly useful include the following:

- SFIP provides demographics and detailed facility reports, which may be useful to community-level groups that want to know what's in their "backyards"

- Compliance information

- SFIP is unique in providing facility production data

Environmental organization representatives have expressed a strong desire to have access to both additional "raw" and analyzed data. One representative commented that SFIP data is "not raw enough." For example, while SFIP provides an indicator that shows if a facility is considered to be in Significant Noncompliance (SNC) for any program, environmental organizations would like access to the underlying data used to determine SNC status. Additional examples of "raw" data these representatives would like to access include: expiration dates for permits; permit limits; more detailed information on violations, such as whether they have been contested by the facility; and information on the CAA attainment status of the facility's location. Environmental representatives stated that data analyses are also valuable, as "sometimes raw is too much to get into." They would like EPA to share any and all analyses performed by the Agency.

Industry representatives who participated in the 1999 discussion group indicated that direct access to EPA's main databases via SFIP could be useful to them. These industry representatives were generally supportive of SFIP's public access goal, stating: "It's good to pull together the programs in one place." These representatives felt that SFIP is a positive step forward and could be an even more "valuable tool if made more user-friendly in terms of understanding the data and if it were easier to get corrections made."

Industry feedback indicated that some companies have tried to develop indicators which allow comparison of environmental performance within or across facilities or companies, suggesting that the summary statistics provided by SFIP might be potentially useful to them. Industry representatives also praised SFIP Facility-level statistics which present CWA permit exceedences as a proportion of reports as an example of a useful and objective measure. Industry representatives stated that their use of SFIP is limited due to concerns with data quality. In addition, they noted that they keep their own compliance records and do not see any additional benefit from being able to obtain data from the SFIP website. However, trade association representatives who met with EPA in March 1999 stated that data in the underlying databases which SFIP integrates has improved in quality as a result of the increased accessibility to this information provided by SFIP, and suggested that increased reliability of the data makes it more

useful. Participants felt that the data's accessibility may provide the means for some facilities to increase their communication with the public. Additionally, a trade association representative reported that some petroleum refineries have indicated that they value information on CWA exceedence and like how this information is presented in SFIP.

An additional indication that users value the kind of data presented by SFIP is that many users, particularly staff from EPA's Regional offices, have expressed strong interest in being able to access data for other sectors through the SFIP website, including metal services, electric utilities, paper manufacturers, and federal facilities. In addition, Hotline users have submitted suggestions for additional sectors, including hazardous materials treatment facilities and large scale animal feeding operations. These and other suggestions for SFIP's expansion are discussed in more depth in the last section of this report.

Are SFIP data understandable?

Of 295 Hotline calls and emails received since May 1, 1998, approximately 50 have been questions about how to interpret SFIP's data. For the most part these questions have been quickly and easily addressed by referring users to pages on the site which describe the SFIP indicators and data reports. Facilities requesting additional information about their own data reports have been referred to Regional contacts. In a few cases, Hotline staff have performed additional research in order to help users interpret quarterly compliance codes for Clean Water Act permits and Clean Air Act permits. Several users have requested clarification on whether particular indicators represent averages or cumulative figures. In addition, two users had questions about how to understand the demographic statistics presented in the Detailed Facility Report.

Both EPA headquarters and Regional staff have stated that SFIP's data are structured in a way that should be understandable to the public. They also felt that SFIP provides valuable background information that enhances the public's understanding of what is occurring at a given facility. The SFIP production data was cited by many participants as an example of valuable context provided by the site because it makes facility comparisons more meaningful by providing a rough measure of facility size and output. For example, users may compare each facility's ratio of chemical releases and transfers per unit produced as well as comparing the absolute amount of chemicals released and transferred. However, Region 2 wants actual – would be even more useful.

During SFIP's development, states expressed concern that the public might misinterpret SFIP data. They have continued to emphasize the importance of providing explanatory context for data. However, 1999 discussion group participants noted that the public has not contacted their agencies with questions about SFIP and they reported no instances of data misuse. One participant stated that "the fact that we haven't had any calls shows that concern that the public will panic was unwarranted". While states expressed appreciation for the extensive documentation provided to help users understand data on the SFIP website, some participants felt that the website might be overly complex for the general public and some were doubtful that data "caveats" will be read and used.

Environmental organization and state agency representatives who participated in the 1999 discussion groups also emphasized the importance of explanatory information that allows users to understand data in context. While some praised SFIP for providing "really good" and "very useful" context, others felt that some SFIP data are difficult to understand and/or not useful. The SNC designation, in particular, is considered problematic. One discussion group member commented that SNC is not valuable to the public because it is not an intrinsically meaningful statistic, but rather, "an EPA-created term that doesn't mean anything to anyone." In order to use it, this person felt, a user has to "dig in, get the guidances, talk to people to find out what they think it means." Similarly, one participant suggested that the Detailed Facility Report should include a placeholder for facilities with no enforcement actions so that it is clear to users that the section has not been inadvertently omitted.[5]

Initial industry concerns regarding contact from members of the public who may have misinterpreted the data have not been substantiated. Facility and trade association representatives who participated in the 1999 discussion groups did not cite instances in which facilities have expended resources to dispel public misinterpretation of the data.

However, while industry representatives felt that the context and interpretation provided by the SFIP website makes it "a database with an attitude, " they also stressed that some SFIP data could be misleading to the public without additional context to provide a complete picture of environmental performance at a given facility. They suggested that additional information on the type and duration of violations would help SFIP's users identify those compliance problems that involve a greater risk to the public. Similarly, industry commented that aggregated or summary statistics are not always comparable when facilities have very different processes.

Industry also stated that CWA Historical compliance data presented in the Detailed Facility reports were difficult to understand. Representatives felt that SFIP's Data Dictionary offered inadequate explanation of quarterly permit level compliance codes and specialized terms such as "Discharge Monitoring Report" (DMR). One commenter questioned the public's ability to use SFIP, "if industry can't understand their own data." For example, it was felt that "the public doesn't know what a DMR is." In addition, industry representatives have suggested that SFIP provide links from the different sections of the Detailed Facility Report directly to the corresponding explanations in the Data Dictionary[6].

[5]As a result of such feedback, SFIP's Detailed Facility Report is currently being revised. A revised version which will include section placeholders where needed and links to specific sections of the Data Dictionary is expected to be available to the public in an upcoming data refresh.

[6]See above.

Are SFIP data easy to find and use?

Based on comments received through the SFIP Hotline and by email, users have found the SFIP website and its features accessible and user-friendly. Only ten of the over 200 users who have called the SFIP Hotline or sent emails from the site required assistance in using SFIP's user-defined searches. In eight of these ten cases, users were quickly able to orient themselves after Hotline staff walked them through a sample search. In the remaining two cases, users did not reply to emails from Hotline staff asking for further information about the nature of their difficulty, suggesting that the users may have resolved their questions in the interim.

EPA headquarters staff who participated in the 1999 discussion groups generally felt that the site is easy to navigate. However, they suggested that the "Disclaimer and Limitations" section of the Data Access pages should appear only when users are ready to submit a query. Regional and state staff who attended website demonstrations at the Regional offices found the website to be "user-friendly" and capable of assisting in Regional analysis. It was commented that SFIP "brings information to the surface" in an understandable format which provides a starting point for discussion. By making information accessible in an easy-to-use platform, SFIP enables all stakeholders to see where potential compliance problems exist and thus can potentially facilitate greater agreement on priorities for enforcement and compliance efforts.

Environmental organizations stated that having electronic access to different kinds of environmental data in one place is valuable because such access saves time and effort, making analysis easier. Because of the convenience provided by SFIP's downloadable spreadsheets, one participating organization prefers to use TRI data from SFIP, although it is available from other sources. Participants also valued the ability to search multiple ways for a particular facility and to sort data for numerous facilities by more than one indicator.

All trade association meeting participants reported that the SFIP website is thought to be user friendly and easy to search for information. All were satisfied with the website as it currently appears and did not believe any changes were necessary. Industry representatives who attended the 1999 discussion group did not have any negative comments on the ease of navigating the website. However, they did suggest that SFIP would be easier to find if the EPA's Home Page provided a direct link to SFIP. In addition, some industry representatives commented that the Detailed Facility Report is difficult to read[7].

[7]A revised version of the Detailed Facility Report which will be available in an upcoming refresh has been resized and reformatted to improve readability and navigability.

Information Use

SFIP data is valued and thus used for many reasons. SFIP makes EPA data uniquely accessible through a single Internet database and provides extensive documentation to enable users to understand the information presented. In addition, SFIP offers indicators that allow users to better "digest" the complex layers of data taken from the underlying databases. Finally, SFIP's data is the product of a thorough quality-assurance process.

The potential results of such use were discussed by participants at recent East and West Coast Conferences co-sponsored by EPA and the National Partnership for Reinventing Government. The conferences were attended by representatives from environmental and community groups, trade associations, small and large business representatives, academics, and federal, state, local, and tribal governments. Attendees felt that public access to facility environmental performance data is one factor which can influence facilities to improve their compliance record. Conference attendees also discussed the need for OECA to move beyond enforcement by developing innovative tools such as SFIP which also have compliance assistance applications. It was commented that "OECA has historically focused on enforcement, but the mission of OECA should focus not just on enforcement but also on... meaningful compliance assistance programs." In addition, internal Agency use of the data means that SFIP functions as a sort of laboratory for data integration initiatives.

This section augments findings from the two preceding sections (Awareness and Customer Satisfaction) by presenting more detailed information about specific uses of SFIP data.

FINDINGS:

EPA and environmental organizations have undertaken numerous analyses using SFIP data.

SFIP facilities primarily access SFIP to verify the data in their own profiles, but at least one company, ASARCO Incorporated, has published several analyses based on the SFIP data.

Use by Environmental Organizations

Environmental organizations have used SFIP to obtain reliable universes of facilities in several sectors; access Clean Air Act violations across all sectors; and assess both facility and regulatory performance. Examples follow.

Council on Economic Priorities (CEP)
The Council on Economic Priorities (CEP) is a non-profit organization that has developed reports on more than 320 corporations, providing "information about corporate social responsibility for consumers and investors." CEP also publishes reports on particular issues and industry sectors (e.g., the petroleum industry, the automobile assembly industry), as well as a consumer guide called *Shopping for a Better World*.

Most recently, CEP used SFIP in developing a report entitled "The Worst and Best Auto & Tire Companies." This report, which analyzed eight automobile assembly companies and five tire manufacturers, was sent to all CEP members. To research this report, CEP used SFIP, the Toxics Release Inventory (TRI), and the Aerometric Information Retrieval System (AIRS). CEP downloaded information from SFIP about pollutants for each facility in the universe of auto assemblers and aggregated them by company to develop a ranking of the most-polluting and least-polluting companies.

Ecology Center of Ann Arbor
The Ecology Center of Ann Arbor is a grassroots environmental organization that works to promote clean air, safe water, healthy communities, and environmental justice. The Center has used SFIP to gather compliance data for the automobile assembly sector and often tracks the performance of individual facilities.

Environmental Defense Fund (EDF)
The Environmental Defense Fund (EDF) is a national non-profit organization with 300,000 members. EDF used the newly launched SFIP website to analyze the incidence of significant Clean Air Act violations and of pollutant spills for each of the industry sectors in the pilot. In May 1998, EDF published a detailed three-page news release entitled "Environmental Defense Fund Analysis of Sector Facility Indexing Data Finds Violators." The news release ranked the sectors by number of violations and spills. According to one EDF staff member, SFIP "provides the public with an excellent means to identify, for example, facilities with the greatest population density and environmental justice concerns, facilities with the best and worst enforcement, and spill records federally or within a particular state, and the states performing the most inspections." Another staff member stated that SFIP "is a model of government responsiveness to the public's need for accessible, facility-specific, environmental protection information."

On another project using SFIP data, EDF worked with Friends of the Earth (see below) to analyze the records of facilities in the iron and steel industry. EDF also used SFIP to help "normalize" data in the five pilot project industry sectors for EDF's own database of industrial facilities, "Scorecard."

Environmental Working Group
The Environmental Working Group (EWG) is a non-profit organization which provides information and policy analysis to the general public, environmental organizations and other public interest groups, journalists, and policy makers. EWG recently used the facility universes defined by SFIP to analyze enforcement efforts and facility compliance with the Clean Air Act for the five sectors included in SFIP. EWG published "Above the Law" in May 1999, and "Above the Law: How California's Major Air Polluters Get Away With It" in July 1999.

Friends of the Earth (FOE)
FOE is a national non-profit organization that works on environmental and citizen empowerment issues. FOE focuses on (1) economics, (2) community, health, and environment, and (3) international issues.

For one project — the Clean Steel Coalition — FOE used SFIP data to help analyze the records of iron and steel facilities. The information was given to community activists working with the Coalition, to help them understand the technical issues and monitor industry activities in their communities. Also, with the aid of such information, citizen activists attending permitting hearings for iron and steel facilities were better equipped to understand the technical aspects of the hearings. FOE has also:

- Obtained TRI data from SFIP for the universe of iron and steel facilities and ranked production efficiency (e.g., how much zinc released/ton of steel)

- Reviewed the demographic information provided in SFIP to study the distribution of minority populations in communities surrounding SFIP facilities

Use by EPA

EPA staff have made use of SFIP for multiple types of analyses, including screening and targeting facilities for compliance assistance and enforcement, accessing background information on specific facilities, and identifying trends in sector data. Examples of analyses undertaken by EPA staff using SFIP data include the following:

- Identification of TRI non-reporters; facilities under-reporting or failing to report TRI chemicals commonly reported within their sector; and facilities with unusually high or low frequencies of reported pollutant spills

- The Office of Compliance and Office of Regulatory Enforcement have used SFIP data as a baseline for trend analysis for the Iron and Steel, Nonferrous Metals, and Petroleum Refining sectors and for developing Sector Strategies for these industries.

- Analyses prepared from SFIP's downloadable spreadsheets have been used by EPA Regions to compare their facilities' performance to national averages.

- Analyses prepared from SFIP's downloadable spreadsheets have been used by EPA Regions to compare their facilities' performance to national averages

Use by Industry

In the 1999 discussion groups, industry representatives stated that their primary use of the site is to review their own facility data. They also described having accessed SFIP data reports for competitors' facilities and having analyzed data for their industry sector to assess which facilities appear to be "bad actors." Some representatives described their own companies' efforts to develop internal environmental measures and to provide environmental information directly to the public (e.g., through their own websites), and said that indicators of environmental performance are potentially valuable. But they stated that due to doubts about SFIP's data quality, they would use internally developed data or obtain data from trade associations rather than use SFIP for benchmarking.

However, at least one company has demonstrated that it believes SFIP data are of sufficient quality for use in its own analyses. As previously mentioned, ASARCO has studied SFIP data for its copper processing facilities and has published several analyses to provide the public with additional information "to enhance understanding of SFIP data[8]." ASARCO feels that SFIP data show that its employees "are doing an excellent job of protecting and improving the environment"[9].

[8]ASARCO press release dated May 1, 1999, www.asarco.com/PressReleases/sfipglov.pdf, referenced October 15, 1999.

[9]ASARCO press release dated May 1, 1999, www.asarco.com/PressReleases/sfipamar.pdf, www.asarco.com/PressReleases/sfipehel.pdf, www.asarco.com/PressReleases/sfipelps.html, www.asarco.com/PressReleases/sfipglov.pdf, www.asarco.com/PressReleases/sfiphay.pdf, referenced October 15, 1999.

Goal 2: Improve multimedia facility profiling and sector-based analysis

The evaluation of SFIP's efforts to define industry sectors, develop facility universes for those sectors, and create whole-facility environmental profiles for each included facility includes a brief summary of the data integration activities undertaken. Feedback from facilities and state and Regional staff during the Data Quality Assurance Review performed between November 1996 and October 1997, shows that permit information can be successfully compiled and summarized on the facility level. SFIP has also been successful by showing that an accurate accounting of the universe of facilities belonging to a given sector is feasible and enhances the value of sector-based analyses, which are increasingly being used by EPA and others to improve environmental management and compliance of the regulated community. In addition to documenting the demonstrated feasibility of such data integration procedures, this section also summarizes the comments of discussion group participants interested in improving environmental data integration.

Advancing Data Integration Knowledge

This section examines how SFIP has advanced EPA's data integration knowledge, by asking the following question:

- What has SFIP shown about the feasibility and benefits of developing reliable facility universes for defined industry sectors and assembling complete permit linkages for a given facility?

Assessing Data Quality in Federal Data Systems

This section discusses the quality of the data compiled by SFIP. Findings are divided into the following sub-sections:

- SFIP's pre-launch Data Quality Assurance Review
- Quality Assurance Procedures for Updating SFIP Data

Advancing Data Integration Knowledge

Data integration efforts within SFIP were designed to achieve multiple objectives: to develop and demonstrate procedures for defining industry sectors and determining the universe of facilities in a given sector; to establish procedures for building complete facility records; and to assess the value of such facility- and sector-level information.

The Problem

Defining which facilities belong within a sector: Several factors make it difficult to reliably identify the universe of facilities belonging to a given industry sector using EPA's data systems. For example, EPA does not collect process-specific information as part of permitting activities and SIC code information in EPA's systems is inconsistent (some data systems have up to six SIC code fields and there is little guidance on entering SIC codes).

Establishing which permits belong to a facility: At the start of SFIP, EPA's Facility Indexing System (FINDS) was the established means of linking the permits and other identifiers of facilities together. While FINDS depended primarily on physical addresses that were in common with the RCRA permit address, it had been inconsistently maintained over the years. Consequently, FINDS-based facility records were incomplete. For example, as many as 50% of PCS permits were not linked to FINDS IDs and facility permits were frequently split among more than one FINDS ID, sometimes resulting in as much as a fourfold overcount of facilities in a given sector. Thus, at the facility-level, FINDS resulted in variable amounts of inappropriate inclusion and exclusion of permits.

The SFIP Approach

To develop reliable facility universes for each sector, SFIP first established definitions for each sector based on similar, specific manufacturing processes. For example, SFIP defines the "Pulp Manufacturing" sector to include facilities producing pulp from virgin materials and facilities that pulp and de-ink secondary (recycled) fiber. SFIP then defined a "facility" as any physical location with one of the defined processes in operation, even if it is not the primary operation. To develop a list of facilities which belong in each sector, SFIP identified independent sources of information about each industry which provided information about the processes used at each facility, facility name, and location.

To establish a set of complete and accurate permit linkages for each facility, SFIP verified and augmented the linkages available through the FINDS system through manual searches of EPA's program databases. In addition, Regional and state staff as well as the facilities themselves reviewed the data reports for completeness and accuracy.

FINDINGS:

SFIP successfully developed and implemented protocols for developing a reliable facility universe for a given industry sector.

SFIP successfully developed and implemented protocols for establishing complete and accurate permit linkages for individual facilities to enable the creation of whole-facility environmental profiles.

Sector Universes

SFIP has assembled sector universes which are more accurate than those available directly from the individual underlying data systems and those previously available through the Facility Indexing System (FINDS). Selecting facilities based on SIC code associated with the permits linked by FINDS can result in as much as a fourfold over count of facilities. During the SFIP Data Quality Assurance Review, 18 of the 661 candidate facilities claimed to be out of scope. Following review of documentation, SFIP was launched with 651 facilities -- 98% of the facilities initially identified. Since the launch, the universe of facilities has been updated by: (1) including newly operating facilities and some facilities that self-identified or were identified by EPA staff or a third party; and (2) excluding facilities that closed in 1995 or 1996 and a number of secondary copper refineries. In total, 19 new or additional facilities have been added to the database, and 30 have been removed.

Permit Linkages

SFIP's permit linkages are accurate and improve on the FINDS linkages. SFIP has reduced the number of erroneously linked permits and captured virtually all of these facilities' permits that had not been linked via FINDS. Permits of several co-located operations (e.g., TRI submissions for on-site energy production, sawmills) were sent to the facilities for their comment rather than have SFIP make the call about appropriate linking. Facilities commented on 211 of the 1,790 total permit linkages presented for review. Of these comments, 158 were accepted.

Table 2: SFIP Approach Improved Sector Universes and Permit Linkages

Universe before Indexing			Universe under SFIP	
Sector	Number of Facilities	Number of AFS, PCS, RCRIS, and TRI permits/identifiers	Number of Facilities	Number of AFS, PCS, RCRIS, and TRI permits/identifiers
Petroleum Refining	856	1,877	179	744
Automobile Assembly	1,682	3,465	58	247
Pulp Manufacturing	299	603	244	971
Iron and Steel Production	550	1,376	114	489
Nonferrous Metal Refining and Smelting	285	708	44	173

As mentioned previously, SFIP users from environmental organizations and EPA have consistently stated that SFIP's externally defined facility "universes" and quality-checked permit linkages make it a uniquely valuable resource for their analyses. The large number of significant data integration efforts being undertaken by state agencies suggests that state governments also place a high value on the ability to assemble accurate facility-level and sector-level profiles. The project will continue to review the universe of facilities within SFIP to ensure such accuracy.

Additional Findings

In the course of developing complete and accurate sector universes and permit linkages, SFIP has brought to light a number of issues related to the compliance information maintained in the underlying data systems. Many of these issues were identified because SFIP effectively focused attention on data quality assurance and enabled public access (and review) of the federal data systems. Other issues were identified because SFIP also provides, for the first time, a tool that lets users easily analyze facility-level data. All issues have been resolved or are currently being addressed. In addition to providing greater public access and improving multimedia facility profiling, SFIP has also brought about improvements in the management of compliance information in the underlying databases, such as: guidance for data entry, data correction procedures, and processing of data as it flows from localities to the federal systems.

- The Regions have reported that SFIP has assisted them in obtaining cooperation from the states in responding to data correction requests and improving data management procedures, resulting in improved data quality.

- SFIP has identified instances where the current facility status was not known or was not entered into the data system, including:

-Was a RCRA permit for a large quantity generator?
-Was a RCRA permit for a Treatment Storage/Disposal facility?
-Was the Significant Noncompliance flag under the Clean Air Act program appropriate?
-Was the return-to-compliance date for RCRA violations entered?

All such issues identified by SFIP in the underlying data bases have been corrected. However, SFIP has shown the potential value of having an automatic or procedural prompt that would require staff to revisit or review such status information.

- Permit identification information (e.g., address, name) was either not collected or not entered into the Clean Water Act program's Permit Compliance System (PCS). Users require such information, for example, to distinguish among multiple permits in the same program. Such information has been collected and entered into the underlying databases as part of the EPA Regional review of the SFIP data or as facility comments were received.

- Two EPA Regions had not applied consistent coding protocols/screens for Administrative Orders (AOs), a type of enforcement action. In one case, certain administrative activities reported by the state environmental agency, such as "construction permit received," were entered into the system as enforcement actions. Such data inaccuracies are now being screened by the Region prior to submission to the federal database. In another case, actions not considered AOs at the federal level were being entered as such into the federal database. This issue is being addressed currently.

- SFIP identified weaknesses in the processing of compliance data from the initial state/Regional data systems into the federal systems and ultimately into the Office of Compliance Integrated Data for Enforcement Analysis (IDEA) system. For example, processing of AIRS Facility Subsystem (AFS) data has resulted in duplication of a limited number of enforcement actions under Clean Air Act programs. In another example, the procedures used to extract Emergency Response Notification System (ERNS) records for IDEA resulted in the misprinting of material spilled names. Programming changes at the Region and within IDEA remedied these problems upon discovery by SFIP.

Assessing Data Quality in Federal Data Systems

Findings concerning the quality of the data compiled by SFIP are divided into two sub-sections. The first describes the results of an initial Data Quality Assurance Review performed before the website's launch, while the second describes SFIP's procedures for updating the website data and maintaining its quality.

In the fall of 1996, EPA invited each state environmental commissioner to provide comments and assistance on the project, while also providing the states the opportunity to review the data during a combined EPA Regional/state review period conducted from November 1996 through February 1997. Prior to SFIP, EPA had never before done this level of research regarding the multimedia records of individual facilities. The states and EPA Regions worked closely together during this process. Because most of these data are gathered and maintained by the states before being compiled in EPA's databases, it was imperative that states be actively involved in this effort to verify and correct the data. In addition, EPA staff reviewed data maintained by the Regions which have not been delegated to the states. The Agency regarded this collaboration as an important process to ensure that the facility-specific compliance and enforcement data are accurately reported to the public. Most of the comments raised by the states participating in the review were relatively minor and were resolved through the coordinated EPA-state effort.

During the period surrounding the May 1997 public meeting announcing SFIP, individual facilities and several trade associations urged the Agency to provide the affected facilities with an opportunity to review the underlying compliance and enforcement data before the data were published. In response to these requests, EPA provided each affected facility with copies of its SFIP data reports in August 1997. Comments received from facilities participating in this review were addressed prior to the website's launch in May 1998. A similar review process was followed for 19 "new" or additional facilities identified during a recent review of the SFIP universe.

Since the website's launch, EPA has updated SFIP data from the underlying data systems once every three months. This keeps the permit-level information current and allows for any corrections made to underlying data systems to be reflected within SFIP. The SFIP Hotline and the website's direct email link allow facilities and other users to continuously submit comments and receive immediate direction regarding correction submittal procedures. Because SFIP reflects unaltered data from several underlying databases, corrections must be made by staff responsible for maintaining these databases. Designated EPA Regional contacts therefore often provide assistance in resolving correction requests. These Regional contacts in turn help a facility identify staff at the Regional or state office who can determine whether the proposed correction is warranted. Facilities whose corrections are accepted may post comments to SFIP's Facility Comment Log. As mentioned above, EPA has also reviewed the SFIP facility universe twice since the website's launch, identifying 19 facilities to be added to the SFIP database and 30 which no longer fall within the defined scope of the project.

FINDINGS:

SFIP's Data Quality Assurance Review, the most comprehensive quality assurance/quality control (QA/QC) procedure undertaken to date which included facility review, showed that compliance data integrated by SFIP are of high quality.

SFIP's commitment to maintaining the highest possible quality of data and intense investment in processing and review of the data is regarded as one of the project's most valuable aspects by outside organizations.

Data Quality Assurance Review and Assessment of Data Quality

During the facility review which followed the combined Regional/state review, 62% of facilities included in SFIP submitted comments. The review categorized data elements into two categories: "major" elements, which include linked permits, enforcement actions and facility compliance status; and "minor" elements, which include facility name, address and date of inspection. Facilities returned comments on approximately 10% of the 37,000 major data elements and approximately 5% of the 19,000 minor elements that they reviewed. About half of these comments were accepted by EPA and the states. Thus, the SFIP data reviewed by facilities had a baseline accuracy of 96%. Specific findings included:

Enforcement Actions => Facilities commented on 64 of the 376 enforcement actions presented. Of these comments, 41 were accepted. Facilities identified another 20 actions not listed, ten of which have been accepted.

Significant Noncompliance (SNC) Status => Facilities commented on 103 of the 1,292 eligible data elements. Of these comments, 90 were accepted.

Quarterly Compliance Status => Facilities commented on approximately 3,000 of the 30,000 quarters of historical compliance status presented for review. Of those, comments were accepted on approximately 2,400 quarters. Note: These values represent an average of the number of quarters presented and commented upon since comments were not coded separately for all eight quarters.

Inspections => Facilities commented on 75 of the 3,761 inspections presented. Of these comments, 31 were accepted. Another 241 inspections were identified, of which 88 have been accepted.

Of 19 "new" or additional facilities which were sent their compliance data for review in 1999 prior to their formal inclusion in the project, 14 (74%) responded. These facilities submitted comments on approximately 4% of all major data elements presented, and only 1% of all minor elements.

EPA headquarters and Regional staff consider SFIP data to be of high quality, pointing out that facilities commented on only a "small amount" of the data they reviewed. Some commenters felt that the initial data quality review demonstrated that such a comprehensive review would not be

necessary for sectors added in the future. Discussion group participants commented that EPA's data quality has improved as a result of SFIP. EPA staff also stated that SFIP has provided the "first comprehensive, credible evaluation of data quality" and suggested that SFIP "can be thought of as a random sample of data from a relatively large number of sources." Also noted was SFIP's power to identify opportunities for data quality improvements through systemic programming changes as well as to pinpoint isolated instances of incorrect data. One EPA data user summarized SFIP's effect on data quality by saying that SFIP's data quality review means it is possible to "talk about the quality of the data," and to use the data.

In a discussion group, representatives of environmental organizations described SFIP data as "the best we have", and "one of the most complete and accurate databases...found." They particularly value the data because it is "quality-checked."

Both trade association representatives and participants in the industry discussion group stressed their concern with the quality of data made public by SFIP. Trade association representatives noted that EPA data quality has improved as a result of the project's release and the data's increased accessibility, while participants in the industry discussion group felt that EPA should strive to meet a standard of 100 percent accuracy for data released to the public. Based on their experience in reviewing reports for their own facilities, industry discussion group participants expressed distrust of SFIP's data quality. One participant stated that although compliance data presented by SFIP contains only a small number of inaccuracies, even one can have a significant impact on public perception of a facility or company's "image."

Finally, state agency representatives who attended a discussion group concurred that, because of the data quality review process, the data in SFIP are probably the most accurate that exist.

Quality Assurance Procedures for Updating SFIP Data

In order to continuously provide up-to-date information to the public, SFIP data is updated, or "refreshed," quarterly. Since the website's launch in May 1998, SFIP data has been refreshed five times. Input from all types of stakeholders indicates that users are satisfied with the number of refreshes being carried out and do not believe more frequent updates are necessary.

Since the website's launch, the SFIP Hotline has processed data correction requests from 72 SFIP facilities. Of these, eight facilities were concerned only with proposed changes to data which they had submitted previously, while 51 facilities submitted "new" comments. Thirteen facilities submitted comments on production data, which they were specifically invited to review in July 1998 and July 1999. In every case, SFIP Hotline staff resolved the problem or referred commenters to a Regional contact who could help them or direct them to a state data steward.

EPA staff noted that SFIP has resulted in increased attention to data quality within EPA. In the discussion group, they also credited the project with helping to create greater awareness of the limitations of the current mechanisms for data correction for all EPA databases, noting that there is "no real identified path for this data correction process."

Industry representatives agreed that it was time-consuming and "resource-intensive" to monitor their facilities' data and submit corrections. Industry has objected that the onus rests with facilities to correct their data, and reported mixed results from their efforts. While several commenters reported that incorrect data for their facilities remains unchanged, another stated that "we did have a good experience getting out data corrected, although it took a while." In addition, one participant commented that being referred back to the ultimate data steward was a difficult process. Facilities requesting corrections since the site's launch via the SFIP Hotline have also expressed frustration with having to make additional phone calls and a few also commented that EPA should bear a greater share of the burden in seeing that corrections are made.

Trade association representatives who met with EPA in March 1999 also relayed a mixed message regarding their members' experience with submitting proposed data corrections. Several participants stressed that monitoring the quality of their data takes staff time, which is a scarce resource for some facilities. While many facilities have had data correction requests resolved in a timely manner without difficulty, some facilities have indicated enough frustration with the process that they had stopped trying to correct data errors. Some pulp manufacturers have expressed frustration with being referred by the SFIP Hotline to multiple data stewards. Participants suggested that EPA appoint an "ombudsman" for facility data correction requests, who would provide one point of contact for all data issues and be able to update facilities on the status of their requests.

Future Directions

SFIP has provided the Agency with an important new tool with which to re-orient the many activities related to data analysis along industry sector lines. This project evaluation has shown that users believe that in order to continue the contributions SFIP has made to date, the project must shift from being a pilot to a more comprehensive sector-based analysis and tracking tool that is available to both internal and external users. To that end, the tool must be expanded to include additional sectors. Users recommended numerous sectors for SFIP's expansion. The list of recommended sectors which are both feasible to include and which are Agency priorities includes but is not limited to: metal services, electric utilities, paper manufacture, and federal facilities. Information on these and the other sectors recommended for addition to SFIP are found below.

In addition to expanding the number of industry sectors included in SFIP, the evaluation revealed that users want and would benefit from other changes to SFIP. Some users recommended changing the website's functionality (changing what can be done with the site and/or SFIP information), for instance, by allowing queries on a user-selected set of facilities or providing the ability to do time-series analyses. Others wanted additional information added into the SFIP tool or to have certain information more readily linked to the site.

The most frequently recommended changes include:

1. Adding new sectors, including but not limited to: metal services, electric utilities, paper manufacture, and federal facilities.
   The procedures to add sectors have been established and have been proven to yield high-quality information. The findings of SFIP's initial data quality assessment indicate that it may not be necessary to repeat such a comprehensive and costly review for new sectors. Resource requirements for adding sectors are associated with sector characteristics, such as number of facilities, complexity of operations, and typical permit requirements.
2. Adding new data elements to information already provided, including, for example: pollutant releases and waste management information from CWA, CAA and RCRA; toxicity weighting; OSHA inspections and more details regarding permits (e.g., expiration dates and emissions limits)
   Adding information that is maintained within the currently-linked data systems can be done with relatively little difficulty. Establishing links to other data systems or entering data from outside sources would be more resource intensive.
3. Extending compliance information beyond the most recent two years
   The underlying data systems do not currently maintain the relevant data for more than two years. Therefore these underlying systems would have to maintain the information for a longer period before such a change could be considered for SFIP. Alternatively, SFIP could make the archived SFIP data (the facility and sector level statistics, now stored in spreadsheet form) directly queriable.
4. Providing users the ability to do geographic mapping and/or to conduct cross-sector analysis in a geographic area
   Research to determine the feasibility of this suggestion could include the development of a prototype that would extend the SFIP tool to cover all facilities in a given geographic

area, such as a metropolitan area (and would include numerous smaller facilities). This would allow EPA to pretest the value of Geographic Information Systems (GIS) query capabilities. This effort might serve as a useful pilot for the GIS tool that is currently under development by OC.

5. Giving users the ability to conduct time series analyses

   Adding this function would require additional investigation into types of time-series analyses users would need. Time series would not be meaningful using the two-year time period currently maintained in SFIP. (See above comment regarding feasibility of adding older data.)

These and other recommended changes are currently being evaluated for feasibility as part of the SFIP planning process.

Additional sectors

Throughout the first year since the SFIP website launch as well as during this evaluation process, all types of commenters have recommended that SFIP should expand to include more industry sectors. Many see the fact that SFIP provides data for only five of the hundreds of major industrial sectors as the project's biggest limitation. The majority of specific requests for additional sectors have come from EPA Regional staff, but every group with which the project had interaction has submitted suggestions: Regional Office staff, state governments, public interest and environmental groups, facility representatives, trade associations and individual citizens. While environmental groups, EPA and states wanted to be able to access data for additional sectors, industry felt that SFIP unfairly "spotlights" the included sectors, implying that they are among the worst in terms of environmental performance. For this reason, industry representatives were interested in seeing SFIP cover all sectors.

As with all comments that have been provided to EPA throughout the project's first year of availability, each recommendation concerning the expansion of SFIP is being given serious consideration. While EPA has not made a final determination on how best to proceed with SFIP, the Agency has begun to study both the feasibility and appropriateness of adding the sectors that have been widely suggested. EPA is considering a variety of factors in addition to information gathered through the evaluation process documented in this report. The Agency's initial assessment for each sector suggested by SFIP users is provided below. Sectors which are listed under the heading "Tier I" have been identified as such based on whether the sector is a current priority of the Agency; the feasibility of obtaining permit and facility information for the sector, and the number of requests to add the sector that have been received.

Tier I Sectors:

Metal services - Metal Services is a National Enforcement Priority Sector for FY2000. OC is currently leading the Agency's efforts in working with the sector to provide compliance assistance. Several Regions have mentioned chrome plating as a priority sector for which SFIP expansion would be a valuable tool. On the other hand, there are tens of thousands of metal finishing operations in the U.S., most of which are small and do not hold federally reportable permits. Many are captive operations in plants that make, for example, appliances. These characteristics make facilities in this sector more difficult to compare and somewhat problematic to incorporate into SFIP.

Paper manufacture - Information on this sector would complement the data for the upstream sector of pulp manufacture, a current SFIP sector. Permit linkages for many of the stand-alone paper manufacturing facilities have already been developed and sources for production information have been identified.

Electric utilities - Large emitters of both criteria air pollutants and toxic air pollutants. The sector is now subject to TRI reporting for 1997 and beyond. In addition, the Natural Resources Defense Council and the Clean Energy Group, an industry association of utilities, recently committed itself to and called for increased disclosure of toxics emissions from all U.S. generating operations. Within the sector there are several logical subsectors, such as fuel type (e.g., coal, oil, gas, nuclear, solar).

Tier II Sectors:

Airline operations - Information on stationary sources of pollution (e.g., cleaning, repainting) is amenable to such indexing, but the operations of the mobile sources (aircraft) are not.

Automobile repair - Such facilities are numerous and nationally distributed. They pose environmental concerns related to hazardous waste generation, sewer discharges and threats to groundwater. OC currently supports compliance assistance efforts within the sector and there are several state and many local authorities now collecting performance information from facilities in this sector. However, facility and permit information maintained within the federal data systems is very limited.

Automobile manufacturing sectors other than assembly (e.g., manufacture of components) - This sector should be limited to parts or component manufacturers that supply the automobile industry.

Biologicals - Facilities tend to be concentrated in certain geographic areas. While there is currently a great deal of research and development activity in this sector, more emissions and regulatory requirements will be triggered when plants move into full production.

Car washes - Like automobile repair facilities, car wash facilities are numerous and nationally distributed. Environmental concern about this sector is related to sewered discharges and threats to groundwater. However, facility and permit information maintained within the federal data systems is very limited.

Chemical fertilizer production - OC currently has an internal tool to provide compliance information for chemical manufacturers. Information already collected for chemical fertilizer producers could be built upon if the sector is added to SFIP.

Concentrated animal feed operations (CAFOs) - A current Agency priority. Ongoing initiatives are expanding the regulatory and reporting requirements for such operations. However, the federal data systems contain limited information on their past performance. This sector is a good candidate for a future addition, once the information for a large fraction of such facilities is included in the federal data systems.

Consumer goods - This sector is composed of facilities involved in the production of a wide variety of products. Since this is a diverse industry, it would be necessary to develop appropriate subsectors.

Electronics manufacture - Like the consumer goods sector, this is a diverse industry for which it would be necessary to develop appropriate subsectors. Printed Wiring Board Manufacture (currently in partnership with the Agency's Design for the Environment Program) and Integrated Circuit Manufacture are two potential subsectors.

Federal facilities - Universe would likely include a subset of the operational sites (either a type of facility and/or facilities within a particular Department or Agency). Nominations were also received for including closed military bases/sites. This sector is the focus of the Federal Facility Enforcement Office within OECA. Including federal facilities in SFIP would provide the public with additional information on the U.S. government's own performance.

Foundries - Selection of stand-alone operations would increase the comparative value of the facility-level information.

Hazardous materials/waste treatment - RCRA subtitle C facilities and solvent recyclers are now subject to TRI reporting for 1997 and beyond.

Major sources subject to maximum achievable control technology (MACT) standards - These facilities tend to be large and fairly complex, with permits in several regulatory programs. Thus indexing across programs has the potential to significantly improve facility information. For inclusion of this sector to be feasible, it would be necessary to limit the universe to a practical number of facilities.

Mining - Another diverse industry for which it would be necessary to develop appropriate subsectors, e.g., coal mining, strip mining, metal mining, or hard rock mining). In particular, adding a metal mining sector would complement the current SFIP nonferrous metal refining and smelting sector. Metal mining and coal mining are now subject to TRI reporting for 1997 and beyond.

Municipal waste combustors - Of environmental concern because they are typically located in or near metropolitan areas with significant releases to air. It may be better to define this sector strictly by operation type rather than by ownership, and thus include all waste combustion and/or cogeneration facilities.

Oil and gas production - Both land and off-shore operations could potentially be included within this sector. The list of currently active sites may be difficult to develop and maintain because production facilities shift between idle and operational depending upon oil prices.

Pharmaceuticals - Facilities tend to be stand-alone operations and are concentrated in certain geographic areas. However a potential difficulty is that this sector includes facilities where R&D operations are mixed with full production operations.

Secondary nonferrous metals - Inclusion of this sector would provide a useful comparison with data for the primary nonferrous metals sector, which is currently included in SFIP.

Sectors covered by OC's Industry Sector Notebooks - The Sector Notebooks were developed for OC priority sectors and/or for sectors for which sector-level information was lacking. All five of the current SFIP sectors are the subject of Sector Notebooks. Users have suggested that expanding SFIP to include the remaining Sector Notebook sectors would be particularly useful.

Wood products - A well-defined facility universe and permit linkages for many of the pressed-wood products facilities have already been developed for this sector.

Sectors covered by FY2000 MOAs - Petroleum Refining is a current SFIP sector. Metal Services is listed under Tier I.

Alternative/Additional Functionality of the SFIP website

Suggestions include:

- Create a version of SFIP that provides whole-facility data for all facilities in a given geographic area (see above).

- Provide a direct link from Facility-level Statistics Reports to the Aggregate Summary Statistics Page for the whole sector.
- Provide links to state environmental websites.
- Provide contact numbers for users to obtain additional background on program-specific data, i.e., the TRI hotline.
- Provide additional compliance record details for the included facilities. This could be done by expanding the existing SFIP Detailed Facility Report, by increasing SFIP's connectivity to IDEA, or by linking SFIP's permits to EPA's Envirofacts System.
- Make it possible to access detailed data and summary statistics for a group of facilities with one search request.

Additional Information

Suggestions include:

- Add informal enforcement actions, such as Notices of Violation (NOVs).
- Replace production capacity with actual production where possible (currently this data is only available for automobile assembly plants).
- Add information on Supplemental Environmental Projects (SEPs) and other civil docket information (useful for environmental justice goals).
- Include state or EPA docket number for Enforcement Actions.
- Add penalty comment field.
- Include information on the quality of the air (degree to which area has met National Ambient Air Quality Standards for the six criteria air pollutants: SO_x, NO_x, CO, particulate matter, ground-level ozone, lead) surrounding the facility.
- Expand SFIP to create a one-stop comprehensive resource for information on included sectors. Users have suggested that the SFIP website could serve as a clearinghouse for numerous kinds of sector-specific information (e.g., history of the industry, etc.) .
- Include information about compliance assistance activities.
- Add voluntary facility initiatives with positive environmental effects to the facility profiles.
- Add hypertext links to company Environmental Health and Safety (EHS) managers and to company home pages "for the other side of the story."
- Expand the compliance history beyond two years to five years (see above).
- Include ownership/corporate-level data.
- Include the cause of pollutant spills.
- Include EPCRA 311, 312 Chemical Storage and Emergency Response Plans.
- Include detailed pollutant reports, including:
  - Clean Air Act: criteria air pollutants; dominant air pollution emission source
  - Clean Water Act: toxic and conventional discharges
  - Resource Conservation and Recovery Act: manifested waste information
  - Toxics Release Inventory: chemical-specific release and transfers
- Add toxicity weighting for use with Toxics Release Inventory reported releases.
- Add sector-level economic measures, such as number of employees, and percent contribution of sector to Gross National Product.
- Include maps of the surrounding area showing other pollutant sources, population and important environmental resources.

APPENDIX 1
WEBSITE USE STATISTICS REPORTS

Cumulative Use Statistics for the Sector Facility Indexing Project (SFIP) Reporting on the Initial 10 Weeks: May 1, 1998 through July 11, 1998

The Sector Facility Indexing Project (SFIP) provides greater public access to environmental data for approximately 650 facilities in five industry sectors. As the SFIP is a pilot project, the Agency plans to evaluate it over the next few months to determine future directions and before making a decision on any significant expansion. As part of this evaluation, we are tracking the usage rates (user sessions and hits) of the website, and identifying trends in how the site is being accessed, and to the extent possible, what type of organizations are using the site. The following report contains our initial findings for how the SFIP has been accessed from its release through July 11, 1998. Such statistics will be gathered on a regular basis. A second report in October will include an assessment of how the data refresh of August 13 affected website use.

In addition to the statistical reports, we plan to evaluate public awareness of the project, and customer satisfaction with the information provided; assess the utility of The SFIP as a compliance and analytical tool; and conduct focus groups to gain in-depth knowledge of how the project's information is being used and how we can improve/expand the SFIP. We plan to initiate these activities in November 1998, six months after the initial release of the data. This will allow sufficient time for us to promote the SFIP, and for users to become familiar with the website and its various functions. This also will allow us to refresh the data two times after the initial release (in addition to the August 13 refresh, we plan to complete a second refresh in early October).

Through such an evaluation, we will be able to make a qualitative assessment of the project and whether we are achieving our goals for establishing the SFIP.

SFIP Goal: Improve multimedia facility profiling and sector-based analysis.
SFIP Goal: Develop analytical tool for government to identify compliance patterns and determine where to place scarce resources.
Assessment: There are currently five OECA projects using the SFIP for root cause analysis, TRI reporting targeting and sector strategy efforts.

SFIP Goal: Provide greater public access to compliance and facility-level information.
Assessment: In reviewing the statistics that we have already gathered, we believe we are presently meeting the goal of being a resource used by the public. Throughout the first two months following its release, the SFIP Website has received a consistent level of interest from a wide range of public users as well as staff at all levels of government. Furthermore, feedback about the SFIP from e-mail, the Hotline and letters, shows that this effort to make public readily understandable environmental performance information (including compliance and enforcement records) is providing reliable and understandable information. There are relatively few comments regarding erroneous information on the site -- each is investigated as soon as we are notified. Very few users reported having difficulty using the site -- in most cases, they wanted to (and could not) access information on facilities beyond the scope of the SFIP.

SFIP Goal: Provide industry with increased ability to design self-policing and compliance assistance programs.

Assessment: Insufficient time has passed since the SFIP launch to characterize industry responses. Identifying and characterizing industry responses will be the focus of future evaluation work.

This memorandum provides statistics on the website's use and summarizes comments received through the SFIP Hotline, via the site's e-mail link, and by regular mail.

Findings

- The long anticipated release of the SFIP led to a high degree of use in the first week of the site's availability. The number of user sessions[1] and hits[2] were at their peak immediately following the initial launch.

- User sessions and hits have leveled off since the post-launch peak, when over 6,000 users accessed the site in the first week. Since then, usage has leveled out to about 1,700 users per week. This leveling off was expected and is considered normal. (It should also be noted that the site was launched just prior to the summer season when fewer people work.)

- Data use is the primary activity of the site's users. On-line analysis, downloading of data files and review of facility records account for between 58 and 67 percent of total hits. While users review the other pages for needed information, they then do what we had hoped - access the data.

- Data for the Petroleum Refining sector and its facilities received the greatest amount of attention. In contrast, while pulp manufacturing data was accessed less often than expected given the sector's size, pulp manufacturers such as Champion Paper, International Paper, Weyerhaeuser, and Georgia Pacific were among the site's most frequent users. Other frequent users of the site included EPA staff at the Regions and HQ, petroleum refining companies such as Amoco, Exxon, and Citgo, and a steel manufacturer.

- Views of the Facility Comment log accounted for one percent of total hits each week, making it the 12th most viewed page. Users are clearly interested in facility comments on their data.

- 108 public comments on the site had been received as of July 11, 1998, approximately half of which came from SFIP facilities and trade associations. The largest number of comments came from the petroleum refining sector, followed closely by the pulp manufacturing sector.

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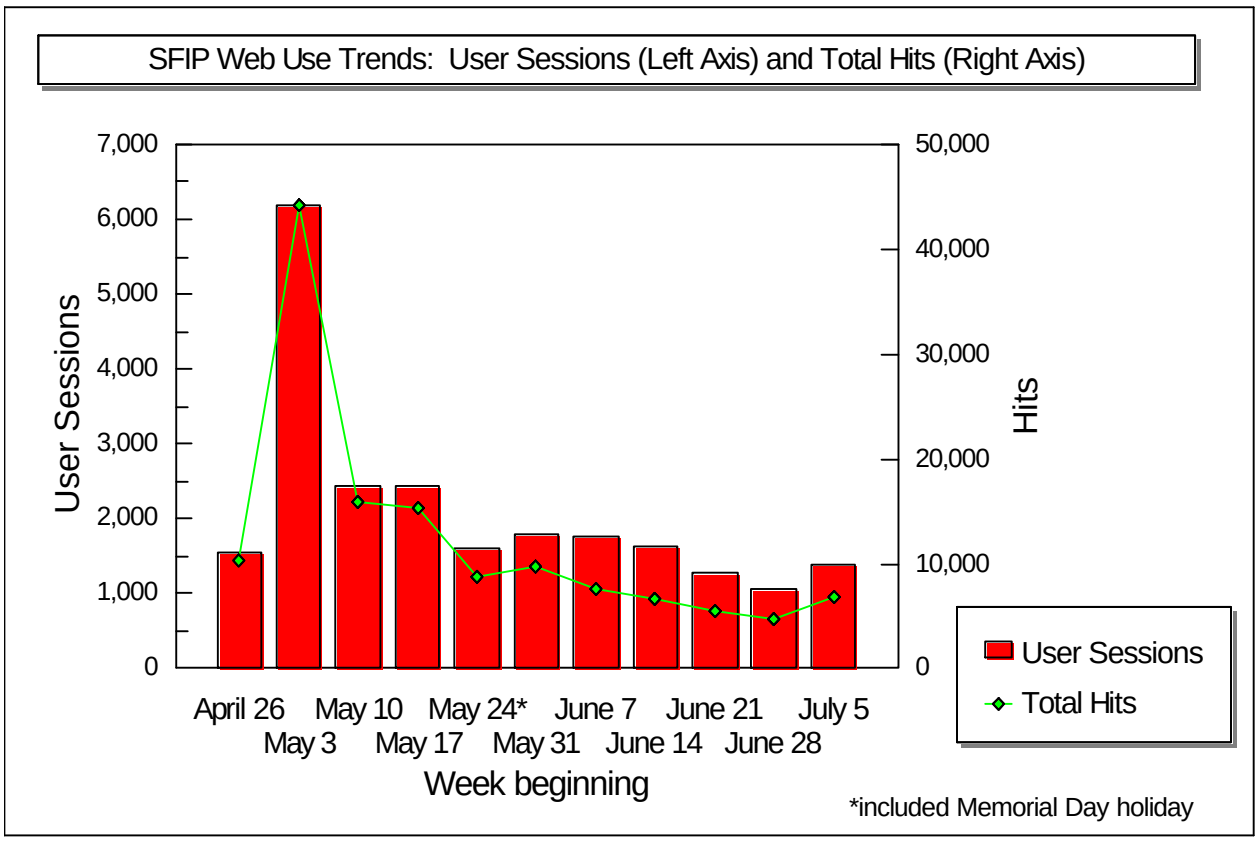
[1] A "user session" is a discrete period of activity generated by a unique user.

[2] A "hit" is an action on the Website, such as the viewing of a page or the downloading of a file from the site.

High Degree of Use Immediately Following Release

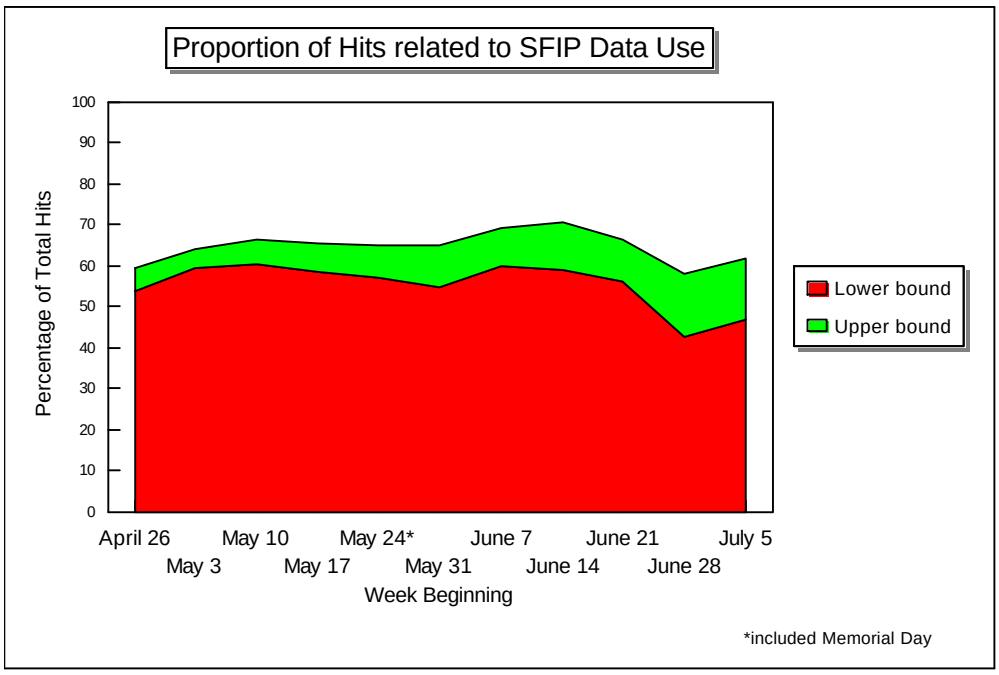


Between May 1 and July 11, users logged a total of 23,167 sessions on the site. The site received 135,674 hits in this period.

Use of the site was most intense during the first full week after the Friday, May 1 launch. In that week, there were 6,178 user sessions, and 44,166 hits. Use was fairly consistent over the subsequent 9 weeks, with an average of 1,714 user sessions per week and 9,019 hits per week. Consistent usage indicates that there is a continual stream of new users (that replace those who no longer access the site). Such expanding publicity and a growing number of individuals who are aware of the site are important elements for broadcasting the existence and uses of the SFIP.

An increase in both hits and user sessions in the week beginning July 5 is most likely attributable to the posting of several new pages presenting 1996 facility production data in preparation for the first data refresh. The recent mailing of an SFIP press package to media across the country may also have contributed to the increased activity on the site.

Data Use Accounted for 57-64 percent of Activity on the Website



A majority of the total hits to the site were generated by users accessing the SFIP's data.

A conservative estimate of data use (the lower bound) was estimated by combining the following tallies:

- Page views[3] directly related to data appearing on the list of 50 Most Requested Pages (includes sector Data Summary pages, sector Data Access pages, Search pages, etc.)
- Data downloads
- Forms and Scripts[4] submitted by users

The upper bound estimate of data use on the Website was generated by adding views of pages which were not accessed frequently enough to appear on weekly lists of "50 Most Requested Pages." Because all major pages (the Home Page, Data Access, Indicators, and search pages, etc.) are represented in the "Most Requested" list, these "unknown views" are assumed to be mostly detailed facility reports views.

[3] A "page view" is a hit to an html text page: this tally excludes downloads, and forms and scripts (see below).

[4] "Forms and scripts" are used to perform searches of SFIP data. For example, a user might input a facility name or state into a form on one of the Easy Search pages. Clicking on "Submit" activates a script that searches for the desired data.

Petroleum Sector Received the Greatest Amount of Attention on the SFIP Website

Page Viewed	Cumulative Hits	Number of Facilities in Sector	Hits/Facility
Petroleum Refining Data Access	3,165	179	18
Pulp Manufacturers Data Access	2,317	247	9
Iron and Steel Mills Data Access	1,536	118	13
Primary Nonferrous Metals Data Access	1,326	51	26
Automobile Assembly Data Access	1,230	58	21

The Petroleum Refining sector received the highest number of total hits (3,165), but the Primary Nonferrous Metals and Automobile Assembly sectors had higher ratios of hits per facility. Although the Pulp Manufacturing Sector has the largest number of facilities (247), it received the second highest number of hits, and had the lowest ratio of hits per facility (9).

Prior to the next phase of SFIP evaluation (during which facilities and other users will be interviewed), we do not know the specific reasons for differences in usage across sectors. However, the following list includes several different factors which affect the measured sector-specific usage:

- Activity of the industry trade associations in reviewing the SFIP.
- SFIP facilities' awareness of Website and activity reviewing information.
- The number of facilities in the sector (e.g., if users view each sector equally, there will be more usage per facility in sectors with fewer facilities).
- Whether the industry is an EPA priority (a major user).
- Interests of the general public.

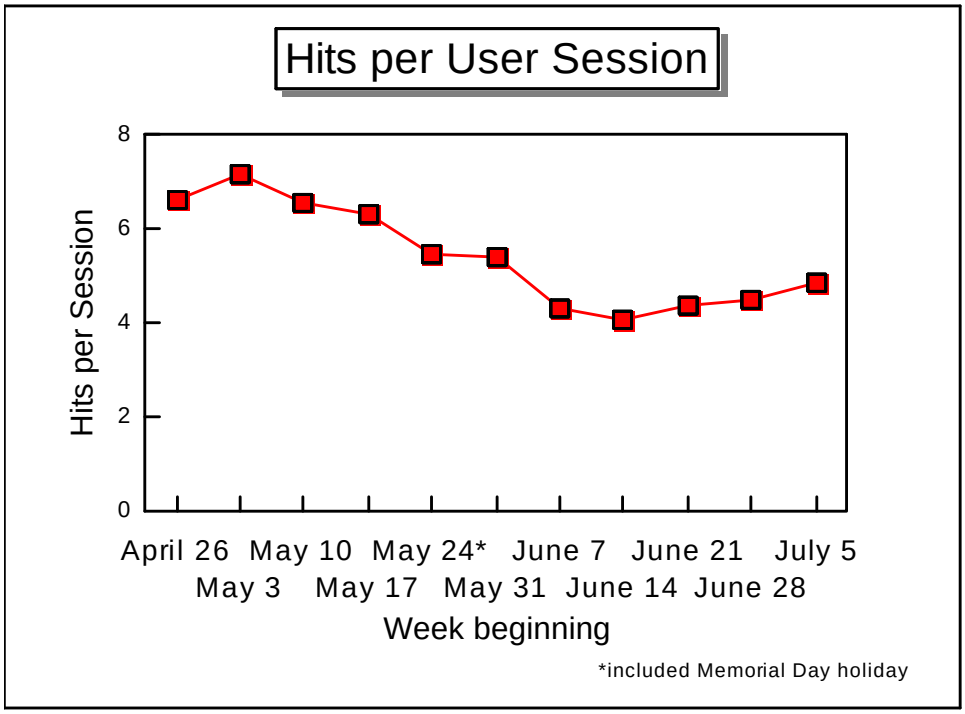
Frequent Users

Identifiable Organization/Types	Total Hits	User Sessions
EPA	5,740	898
Pulp Manufacturing sector	2,779	157
Petroleum Refining sector	888	42
Research Institutions	860	39
Other Federal Agencies	237	8
Other Industry sectors	143	7
Steel Manufacturing sector	135	8
	10,782	**1,159**

Using weekly lists of the 10 "Most Active Organizations", approximately 17 percent (3,938) of the 23,167 user sessions logged from May 1 to July 11 are identifiable by their Internet domain names. Of these, about 70 percent originated from the domain names of Internet service providers (ISPs), such as America Online or Erols, and no further identification of users can be made.

For **1,159** user sessions, or 5 percent of the total, users can be identified by organization name. These users are listed in the chart, ranked by total hits. However, because statistics are available only for the 10 most active organizations in a given week, these rankings are only approximate, and each organization type is likely to have logged more user sessions and hits to the site than are shown here.

Slight Decline in Hits per Users Session as Expected



A declining ratio of hits per user session is expected as repeat users become more familiar with the website and use shortcuts to access only the information they wish to retrieve. For example, users who have previously read SFIP data element descriptions may not need to consult the Indicators page again. Users who are interested only in a particular sector may have bookmarked that sector's Data Access page, bypassing the home page and the general Data Access page.

The Facility Comment Log Consistently Received Attention

During each week since the site's launch, from May 1 to July 11, the Facility Comment Log received one (1) percent of all hits by users. Cumulatively, the Facility Comment Log was the 12th most viewed page.

Thus, we can see that users are interested in knowing whether facilities have needed to respond to the data that we have released.

Five facilities submitted comments for posting on the site.

Summary of Public Comments as of July 11, 1998

A total of 108 inquiries and comments had been received as of July 11. These included:

- 70 Hotline calls (from 60 different facilities or organizations)
- 32 e-mails
- 6 written letters

Facilities or their corporate representatives accounted for 54 of 108 public comments (50%), including:

- 20 from the petroleum refining sector
- 19 from the pulp manufacturing sector
- 11 from the primary nonferrous smelting and refining sector
- 3 from the iron and steel production sector and
- 1 automobile assembly facility (BMW)

Sixty-one of 108 public comments (56%) concerned the data presented on the Website. Of these,

- 28 facilities or their corporate representatives requested corrections for their data. Of these,
  - 15 were new requests
  - 11 concerned data for which corrections had previously been requested but not made by Regions or States before the August refresh.
  - 1 facility volunteered information about a change of facility ownership and
  - 1 facility did not provide details before being referred to the Regional contact
- 16 comments included requests for explanations of particular data elements. Most frequent comments related to DMR filings, including disputed violations and late filings as well as nonexistent permit limits. These were investigated as received and issues that could not be resolved by contractor and SFIP staff were forwarded to the appropriate Regional and staff.

Additional comments included:

- 20 questions about how to access or use the site, all of which were easily and immediately addressed.
- 11 requests for more information about the project
- 5 inquiries or suggestions about sectors to be added in the future
  One user suggested adding the large-scale animal feeding industry, while another felt that hazardous materials treatment facilities “should be at the top of your list”.
- 3 users offered congratulations on the site’s launch, while
- 2 users expressed concern that the site is hard to find or to use. One user expressed a wish for clearer signposts to help users get to the SFIP from the EPA main home page. The second user may have had problems with their software but could not be contacted (leaving no return address).

Project Use by EPA:
To date, there are currently five OECA projects using the SFIP for a variety of purposes:

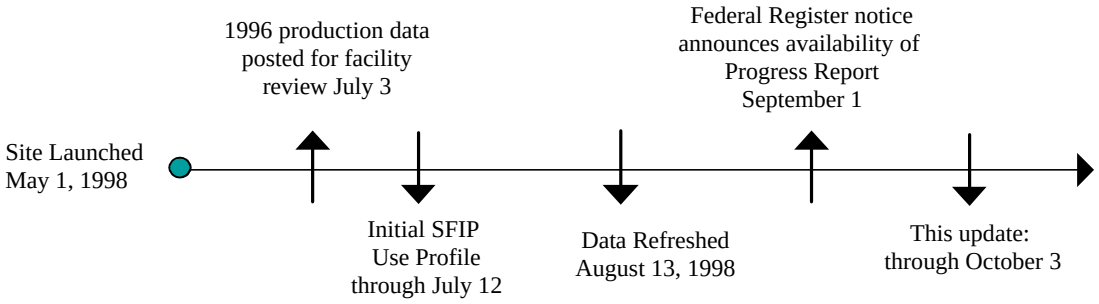
- 1998 Inspection Targeting for RCRA Enforcement Section (Office=Region IX)
- Nonferrous Metals Root Cause Analysis (Office=OC/METD)
- Iron and Steel Sector Strategy (Office=ORE, Region V)
- Iron and Steel Root Cause Analysis (Office=OC/METD)
- TRI Sector Targeting (Office=OC/EPTDD)

Cumulative Use Profile for the Sector Facility Indexing Project (SFIP)

Update#2

May 1 through October 3, 1998

This memorandum provides statistics on the website's use and summarizes comments received through the SFIP Hotline, via the site's e-mail link, and by regular mail. In considering these statistics, it may be helpful to keep in mind the following significant events in the life of the site:



Findings

- User sessions and hits have remained steady since the launch, averaging approximately 1,500 users per week.
- Data use continues to be the primary activity of the site's users. On-line analysis, downloading of data files and review of facility records accounted for between 50 and 67 percent of total hits.
- The Petroleum Refining sector continues to receive the greatest amount of attention, while the Primary Nonferrous Metals Smelting and Refining and Auto Assembly sectors continued to have the highest ratios of hits per facility.
- Pulp manufacturers and petroleum refining companies continued to be among the most frequent users of the site. Frequent new users include the Environmental Defense Fund and the Environmental Working Group, as well as two states, Missouri and Maine.
- The Facility Comment log was the 11th most viewed, indicating strong user interest in whether facilities have submitted corrections for their data.
- Of 192 inquires or comments received since the site's launch, 84 were received between July 12 and October 3, 1998. Almost half of these were requests for copies of the SFIP Progress Report. Approximately 36% (30) came from SFIP facilities and trade associations, 19 of which were from the Petroleum Refining sector. Commenters were more likely to request explanations and less likely to request data corrections than previously.

Background

The Sector Facility Indexing Project (SFIP) provides greater public access to environmental data for approximately 650 facilities in five industry sectors. As the SFIP is a pilot project, the Agency plans to evaluate it over the next few months to determine future directions and before making a decision on any significant expansion. As part of this evaluation, we are tracking the usage rates (e.g., user sessions and hits) of the website, and identifying trends in how the site is being accessed, and to the extent possible, what type of organizations are using the site. This, the second report, contains our findings on how the SFIP has been accessed during its first five months. Use statistics will continue to be gathered on a regular basis.

In addition to the statistical reports, we plan to evaluate public awareness of the project, and customer satisfaction with the information the SFIP provides; assess the utility of the SFIP as a compliance and analytical tool; and conduct focus groups to gain in-depth knowledge of how the project's information is being used and how we can improve/expand the SFIP. We plan to initiate these activities in January 1999, eight months after the initial release of the data. This schedule will allow time for users to become familiar with the website and its various functions. The evaluation will enable us to make a qualitative assessment of the project and whether we are achieving our goals for establishing the SFIP.

SFIP Goal: Improve multimedia facility profiling and sector-based analysis.
SFIP Goal: Develop analytical tool for government to identify compliance patterns and determine where to place scarce resources.
Assessment: Eight projects using SFIP data have been identified. Six OECA projects are using the SFIP for root cause analysis, TRI reporting targeting and sector strategy efforts. Region X's PCB Coordinator has used SFIP inspection data for enforcement and compliance assistance targeting. Region VI is using the SFIP to assess the accuracy of Standard Industrial Classification code reporting by petroleum refineries. In addition, a systematic review of RCRIS data currently being undertaken by OECA was prompted by the discovery of a data quality problem (omission of return to compliance information) during development of the SFIP.

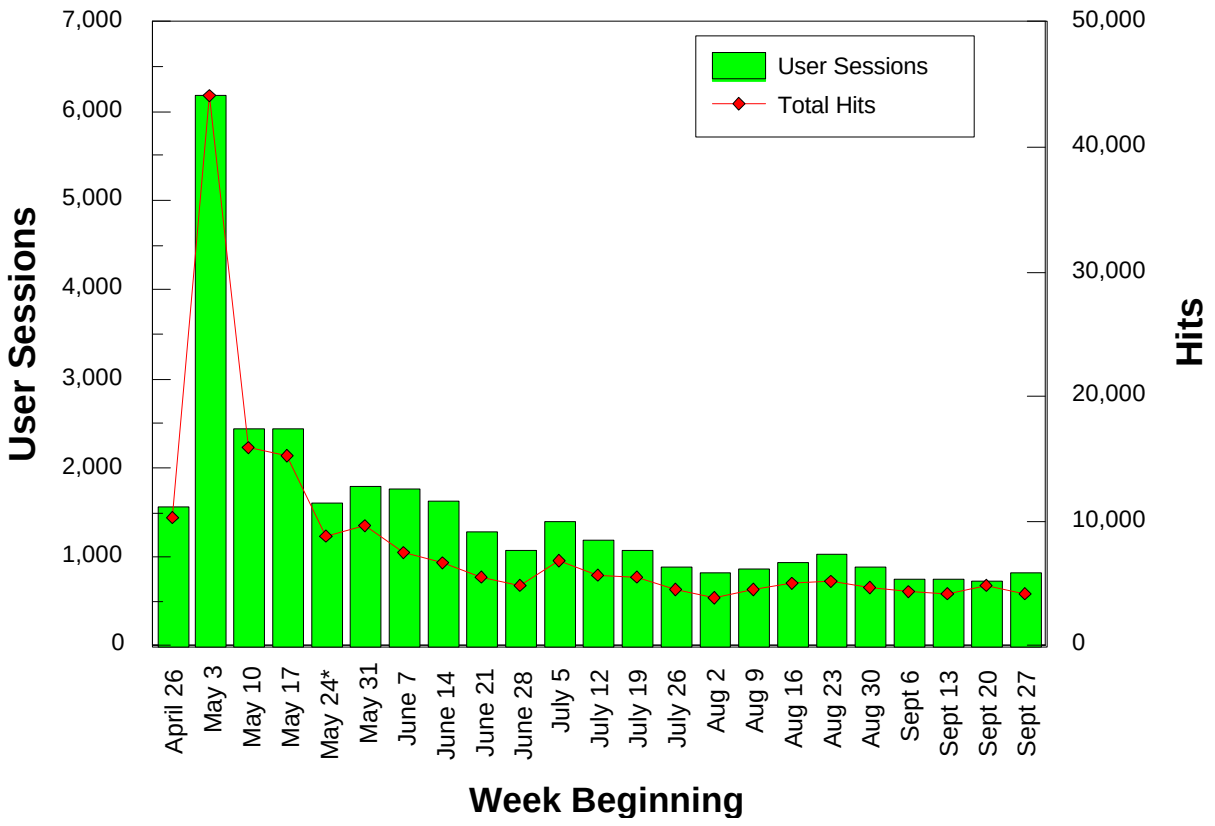
SFIP Goal: Provide greater public access to compliance and facility-level information.
Assessment: In reviewing the statistics that we have already gathered, we believe we are presently meeting the goal of being a resource used by the public. In the first five months following its release, the SFIP Website has attracted a wide range of public users as well as staff at all levels of government. Furthermore, feedback via e-mail, the SFIP Hotline and letters, shows that users feel SFIP is providing reliable and understandable information. There are relatively few comments regarding erroneous information on the site -- each is investigated as soon as we are notified. Very few users have reported having difficulty using the site.

SFIP Goal: Provide industry with increased ability to design self-policing and compliance assistance programs.

Assessment: Insufficient time has passed since the SFIP launch to characterize industry responses. Identifying and characterizing industry responses will be the focus of future evaluation work.

Website Use Remains Steady

User Sessions (Left Axis) and Total Hits (Right Axis)

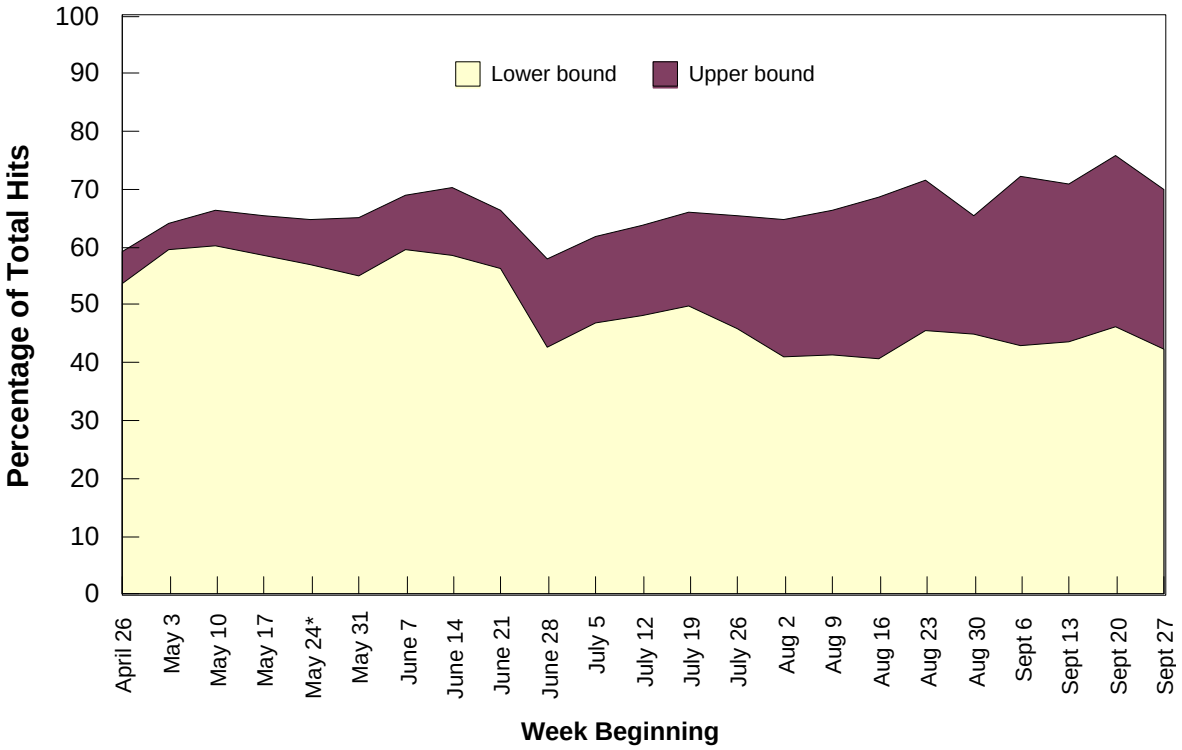


In the five months between May 1 and October 3, 1998, users logged a total of 33,952 sessions on the site. The site received 192,116 hits in this period.

In the ten weeks following the SFIP's launch (May 10 to July 11), there were an average of 1,714 user sessions per week, and 9,019 hits per week. Subsequent use has been fairly consistent, with an average of 899 user sessions per week and 4,704 hits per week. Peaks during the weeks of July 5 and August 23 probably reflect users' response to changes on the site: 1996 production data for facility review was posted on July 3, and the site's first data refresh took place on August 13. In both cases, trade associations for the SFIP sectors were notified, and prominent flashing icons alerted users to the changes.

Data Use Continues to Account for More than Half of Activity on the Website

Proportion of Hits Related to SFIP Data Use



In the five months between May 1 and October 3, 1998, between 50 and 67 percent of all hits were generated by users accessing the SFIP's data[5].

The increasing gap between the lower and upper bound probably reflects repeat users accessing detailed facility reports more frequently (increasing upper bound) and using shorter paths to reach them (decreasing lower bound).

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[5] A conservative estimate of data use (the lower bound) was estimated by combining the following tallies:

- Page views directly related to data appearing on the list of 50 Most Requested Pages (includes sector Data Summary pages, sector Data Access pages, Search pages, etc.)
- Data downloads
- Forms and Scripts submitted by users

The upper bound estimate of data use on the Website was generated by adding views of pages which were not accessed frequently enough to appear on weekly lists of "50 Most Requested Pages." Because all major pages (the Home Page, Data Access, Indicators, and search pages, etc.) are represented in the "Most Requested" list, these "unknown views" are assumed to be mostly views of detailed facility reports and facility-level statistics reports.

Petroleum Sector Continues to be the Most Viewed Sector

Page Viewed	Cumulative Hits	Number of Facilities in Sector	Hits/Facility
Petroleum Refining Data Access	4,135	179	23
Pulp Manufacturers Data Access	3,102	247	13
Iron and Steel Mills Data Access	2,050	116	18
Primary Nonferrous Metals Data Access	1,773	51	35
Automobile Assembly Data Access	1,585	58	27

During the five months prior to October 3, users continued to give their attention to the various sectors in approximately the same proportions as in the site's first three months. The Petroleum Refining sector continued to receive the highest number of hits (970 for the recent period, 4,135 cumulative). The Primary Nonferrous Metals and Automobile Assembly sectors continued to have the highest ratios of hits per facility. Although the Pulp Manufacturing Sector has the largest number of facilities (247), it has received only the second highest total number of hits, and has the lowest ratio of hits per facility (13).

Prior to the next phase of SFIP evaluation (during which facilities and other users will be interviewed), we do not know the specific reasons for differences in usage across sectors. However, the following list includes several different factors which affect the measured sector-specific usage:

- Activity of the industry trade associations in promoting their members' awareness of SFIP;
- Level of awareness and interest among a given sector's facilities;
- The number of facilities in the sector (e.g., if users view each sector equally, there will be more usage per facility in sectors with fewer facilities);
- Whether the sector is an EPA or state priority (EPA is a major user of the site); and
- Interests of the general public.

The Facility Comment Log Received Consistent Attention

The Facility Comment Log is the 11th most viewed page, indicating strong user interest in whether facilities have submitted corrections for their data.

As of October 3, five (5) facility comments had been posted on the site.

Frequent Users

Identifiable Organization/Type	Total Hits	User Sessions
EPA	10,265	1,579
Pulp Manufacturing sector	3,791	244
Petroleum Refining sector	1,292	90
Research Institutions	946	43
Other Federal Agencies	441	20
Environmental Organizations	210	33
Other Industry sectors	209	9
Steel Manufacturing sector	135	8
States	130	6
Law Office	44	3
TOTAL	17,463	2,035

Using weekly lists of the ten "Most Active Organizations,"[6] 2,035 user sessions (6% of 33,952), users can be identified by organization name. However, because statistics are available only for the ten most active organizations in a given week, these rankings are only approximate and each organization type identified above is likely to have logged more user sessions and hits to the site than are shown here.

[6] Approximately 21 percent (7,227) of the 33,952 user sessions logged from May 1 to October 3 are identifiable by their Internet domain names. Of these, about 65% originated from the domain names of Internet service providers (ISPs) or search engines, and no further information about the individual users accessing SFIP is available.

Public Comments, July 12-October 3, 1998

Trends

Of 192 inquires or comments received since the site's launch, 84 were received between July 12 and October 3, 1998.

Almost half (41 of 84) of these were requests for copies of the SFIP Progress Report.

For SFIP facilities, petroleum refineries continued to be the most frequent commenters. A smaller proportion of recent commenters were pulp manufacturers and nonferrous smelters/refiners.

Recent comments concerning SFIP data were more frequently requests for explanations, and less frequently requests for corrections.

Recent requests for data corrections were more likely to be first-time requests; follow-up calls concerning previously requested corrections were less frequent.

The 84 comments received included:

- 71 Hotline calls (from 63 different facilities or organizations)
- Ten (10) e-mails
- Three (3) written letters

Facilities or their corporate representatives accounted for 30 comments (36%), including:

- 19 from the petroleum refining sector
- Six (6) from the pulp manufacturing sector
- One (1) from the primary nonferrous smelting and refining sector
- Two (2) from the iron and steel production sector and
- Two (2) automobile assembly facilities

Twenty-three public comments (27%) concerned the data presented on the Website. Of these:

- 12 facilities or their corporate representatives requested corrections for their data. In addition, 2 state agency staff called about facilities who disputed SFIP data. Of these data correction requests:
  - Seven (7) were new requests
  - One (1) concerned data for which corrections had previously been requested but not made by Regions or States before the August refresh.
  - Six (6) concerned the 1996 production data which facilities reviewed in July
- Ten (10) comments included requests for explanations of particular data elements. These were investigated as received and forwarded to Regional staff when necessary.

Additional comments included:

- Seven (7) questions about how to access or use the site, all of which were easily and immediately addressed.
- Nine (9) requests for more information about the project, including three (3) inquiries about EPA's plans to add other sectors in the future.
- Three (3) callers were seeking data not presented by SFIP, including one request each for "chemical product information", corporate-level environmental performance data, and statistics on criminal enforcement actions.

Project Use by EPA:

To date, eight projects using the SFIP have been identified.:

- 1998 Inspection Targeting for RCRA Enforcement Section (Office=Region IX)
- Iron and Steel Sector Strategy (Office=ORE, Region V)
- Iron and Steel Root Cause Analysis (Office=OC/METD)
- TRI Targeting (Office=OC/EPTDD)
- Nonferrous Metals Root Cause Analysis (Office=OC/METD)
- Nonferrous Metals Sector Strategy (Office=OECA/OSW)
- PCB enforcement and compliance assistance targeting by Region 10
- SIC Quality Assurance for Petroleum Refineries by Region 6

In addition, a systematic review of RCRIS data currently being undertaken by OECA was prompted by the discovery of a data quality problem (omission of return to compliance information) during development of the SFIP.

United States
Environmental Protection
Agency

Communications, Education,
And Public Affairs
(1703)

EPA Environmental News

FOR RELEASE: MAY 1, 1998

EPA EXPANDS COMMUNITY RIGHT-TO-KNOW EFFORTS TO INCLUDE ENVIRONMENTAL PERFORMANCE OF FACILITIES IN FIVE INDUSTRY SECTORS

Tanya Meekins 202-260-1387

As part of the Clinton Administration's efforts to expand the public's right to know, EPA today announced the Sector Facility Indexing Project, a pilot program that will provide for the first time comprehensive information through the Internet on the environmental performance of hundreds of facilities in five major industries. These data were subject to a thorough quality review to assure accuracy that included extensive comments by industries and states, the primary source of this information.

"Today's action is part of the Clinton Administration's commitment to expand the public's right to know," said EPA Administrator Carol M. Browner. "Putting high-quality environmental information into the hands of citizens is one of the most powerful tools for protecting public health and the environment in our communities. The information in this pilot program comes largely from industrial and state sources and has been subject to a rigorous quality-assurance process."

The industrial sectors covered include: automobile assembly, pulp manufacturing, petroleum refining, iron and steel production, and the primary smelting and refining of aluminum, copper, lead and zinc (nonferrous metals).

The new database covers 653 facilities within the five sectors, and for the first time collects in one place information that the facilities must provide under a number of federal environmental statutes. The data include information on past inspections and enforcement actions, the size of the facilities and their annual releases of chemicals into the environment. Demographic data about communities near the facilities are also included.

The database has multiple uses. Facilities can benchmark their data against those of other similar facilities, or simply monitor their own regulatory performance. Environmental and community groups now have easier access to information that they can use to learn about the

environmental performance of individual facilities. Government agencies can use the information as a planning tool.

Stakeholders, including environmental and community organizations, have commented on the project. Each facility included in the pilot project received a copy of its records and was given an opportunity to submit corrections. State agencies also received the information for review, since a large portion of the data is provided to EPA by state governments. EPA modified the data as appropriate, based on these comments. EPA will continue taking comments as this pilot project evolves.

The data are available at Internet address http://www.epa.gov/oeca/sfi.

R-55

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